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MILITARY AFFAIRS

No. 1668

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MILITARY POLITICAL ISSUES

ECONOMICS AND DEFENSE CAPABILITIES DISCUSSED

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) pp 14-15

[Article by assistant professor, Candidate of Economic Sciences Colonel A. Ivanov: "The Economy and the Country's Defense Capabilities"]

[Text] The Soviet Union has begun its 11th Five-Year Plan. Its main objective, the 26th CPSU Congress noted, is to ensure further growth of the welfare of the Soviet people on the basis of steady, progressive development of the national economy, acceleration of scientific-technical progress, shifting of the economy to the intensive path of development, more sensible use of the country's productive potential, all-out economization of all resources and improvement of work quality.

The new five-year plan is an important stage in implementation of the party's long-term plans associated with socioeconomic development, construction of the material-technical base of communism, development of socialist social relationships and the socialist way of life and formation of the new man. Making an effort to create the material-technical base of communism and raise public welfare, the CPSU and the Soviet state are devoting much attention to strengthening the motherland's defense capabilities. We will continue to display untiring attention toward strengthening the country's defenses, the 26th CPSU Congress noted. We need not doubt that our valorous armed forces will be supplied with everything they need to dependably withstand attempts by imperialist forces to achieve military superiority.

However, it should be emphasized here that the Soviet state has never armed itself without cause, it has never been and will never be the instigator of an arms race. It was born beneath the banner of a struggle for a sound and just peace and for international security, and it is firmly holding onto this Leninist principle. Our love of peace stems from the very essence of socialism. We have no classes and no social groups interested in the arms race. We have no people who get rich off of arms production. On the contrary the Soviet people need peaceful conditions for implementation of their plans of building a new society.

As far as strengthening the country's defense capabilities and its material foundation is concerned, the measures being implemented for this purpose by the party and the Soviet state are forced upon the latter. They are a response to the aggressive policy of imperialism and its aspiration to resolve, in its favor and by force of arms, the fundamental contradiction of the modern era--the contradiction between socialism and capitalism. Imperialism initiated the arms race and is responsible for its growth, and it is forcing material preparation for a new world war. History and the recent facts confirm that the imperialist countries, primarily the USA, are the initiators of the arms race, and not the Soviet Union.

The Soviet Union and other fraternal countries of socialism stand as a dependable roadblock to militarism and aggression. As a result of their activities, which are founded on the growing economic and defensive power of the USSR and of the entire socialist fraternity, the international situation was improved in the 1970's. However, the positive changes in the world were met by fierce resistance on the part of imperialist reaction, which is clearly not pleased with the growing influence of real socialism, with the expansion and reinforcement of its positions, with the growing force of the struggle for national liberation and with progressive weakening of the economic and political positions of imperialism itself.

Aspiring to put the brakes on the objective processes of social progress, imperialist circles, and mainly the USA, have assumed a course hostile to detente, a course toward growth in the arms race, resulting in intensification of the danger of war. The aggressive NATO bloc is constantly increasing its military power. In 30 years, from 1949 to 1979, its military expenditures increased by almost 10 times--from $18.4 billion to about $180 billion. In 1980 they were $225 billion, and the total planned for 1981 is $300 billion.

These billions materialize themselves in armament. NATO possesses more than 80 divisions, 17,000 tanks, 8,000 warplanes (to include 2,000 capable of carrying nuclear weapons) and almost 1,500 warships. Under pressure from the USA the European NATO countries have adopted numerous obligations associated with increasing their military potentials, modernizing their armed forces and reequipping them with new forms of weapons.

American imperialism is the instigator of the arms race. In the 1981 fiscal year the Pentagon was given an unprecedented sum--more than $170 billion! Two new forms of mass destruction weapons are being created on an accelerated schedule, and efforts are going on to modernize conventional arms.

Nor can we ignore another dangerous phenomenon in world politics--imperialism's partnership, and mainly that of the USA, with Beijing's hegemonism.

The aggressive policy of the imperialist states, noted CPSU Central Committee General Secretary Comrade L. I. Brezhnev at the 26th CPSU Congress, is presently characterized by adventurism and a readiness to stake the vital interests of mankind on their narrow mercenary goals. In this situation we are compelled to display constant alertness and concern for our security.

Solving the problems connected with strengthening defense capabilities, the CPSU and the Soviet state rely on the country's economic potential. The course toward all-out improvement of the effectiveness of social production and toward its intensification, charted by the party and now being implemented persistently, is helping us to realize the available potentials to the maximum. This course is documented in the decisions of the 26th CPSU Congress.

The scale of production and the dynamics of its growth provide eloquent testimony to the real economic power of the Soviet state and its further growth. In 1980 our country produced 1,295,000,000,000 kilowatt-hours of electric power, which is more than 26 times the amount produced in 1940. In comparison with 1940 we extracted almost 20 times more petroleum and smelted over eight times more steel. And consider that the economic potential of the 1940's was able to support our victory in the Great Patriotic War.

Even higher summits are opening up before us in the 11th Five-Year Plan. Progressive development of Soviet society is guaranteed, as we know, mainly by the economic power of our country. It is namely in economics that V. I. Lenin saw the main battleground for communism. It is namely economics that he envisioned as the focal point of the policy of the Communist Party and Soviet state. Lenin's conclusion was: "Our main policy today must be an economic policy, one of building the state." Stated more than 60 years ago, it is still important today. A confirmation of this can be seen in the plans for economic and social development drafted by the 26th CPSU Congress for the 11th Five-Year Plan and in the future to 1990.

The economic potential of the Soviet Union is the general foundation for satisfying all of the society's needs, including its demand for servicemen. Our country's love of peace is not a sign of weakness. Our potentials are extremely great. In 5 days we produce national income equal to the annual total of 1928--the year just prior to the First Five-Year Plan. The USSR's economy is characterized by high mobility--the ability to react swiftly to fluctuations in the needs of the society, the ability to increase the society's material blessings, to produce new types of products and to sensibly distribute productive forces over the country's territory. Territorial-production complexes are undergoing formation in various regions. Soviet industry, which has great significance to the national economy and to defense, is developing stably, and at a high rate.

Just in the 1970's production of the resources of production increased by the same proportion as in the previous 20 years. In comparison with the 1960's, electric power production doubled. In the last decade the country received 460 million more tons of steel than in the preceding decade. Production of chemical and petrochemical industry more than doubled. The technical base of agricultural production was noticeably strengthened.

In the Soviet Union, outlays associated with military needs are determined, as is emphasized in party documents and in the works and speeches of Comrade L. I. Brezhnev, by the limits of the defense requirements. We spend on defense exactly the amount necessary to ensure the Soviet Union's dependable security and protection of the achievements of socialism together with fraternal countries.

Owing to their effective use, the allocations are dependably ensuring the required defense capabilities for the Soviet Union. The most important advantages of socialism, such as public ownership of the resources of production, a planned economy and others, permit us to realize the country's military and economic possibilities most fully. Eloquent evidence of this can be found in the history of World War II.

In 1941-1944 fascist Germany and its captured countries smelted three times more iron and steel and mined five times more coal than did the Soviet Union. Nevertheless during the war the USSR produced almost twice as much of the principal types of equipment and weapons as did Hitler's Germany. The prominent American scholar K. Knorr wrote that for every 1,000 tons of smelted steel, the USSR produced more than the USA during the war: 6 times more tanks and self-propelled guns, 13 times more artillery pieces, 30 times more mortars, 2 times more machineguns and automatic rifles and 3.5 times more airplanes.

The Soviet Union was far ahead of fascist Germany in the quality of the weapons and combat equipment. What can compare with the legendary T-34 tank? During the war the Nazis changed the design of their tanks three times. But they never were able to achieve the fighting power typical of Soviet vehicles.

Now the enormous scale of our economic development is also making it possible to both raise the standard of living of the laborers and strengthen the country's defense capabilities. Today, USSR Minister of Defense Marshal of the Soviet Union D. F. Ustinov noted, "the economy, science and technology of our country are in a position to support creation of any arms upon which our adversaries may try to rest their hopes."

The CPSU and Soviet government have never used, and have no intention of using these possibilities for achieving military superiority over other states. All that the USSR does to improve the armed forces and to equip them is done with a single goal--defense. "We have never tried and we are not now trying to achieve military superiority over the other side. This is not our policy," said Comrade L. I. Brezhnev at the 26th CPSU Congress.

Owing to the untiring concern of the Leninist party and the selfless labor of the Soviet people, the armed forces possess everything they need to fulfill their mission of defending their motherland and the achievements of socialism and communism. We possess the most sophisticated strategic missile forces, ground troops, air defense forces, air force and navy.

Implementing the historic designs of the 26th CPSU Congress, our people will make the material foundation of the fighting power of the army and navy even stronger, and as a result of this their combat worthiness and combat readiness will rise even higher.

Surrounded by the concern of the party and people, Soviet soldiers are persistently mastering the weapons and combat equipment entrusted to them, they are raising the effectiveness of their use, and they are fighting to preserve and economize material assets and resources.

As we can see from the above, the economy and defense of the Soviet state are most intimately associated. V. I. Lenin noted: "We cannot make the country defensible without the greatest heroism of the people, who are decisively and boldly causing great economic transformations." He taught the party and people to prepare for defense of the socialist fatherland "long and hard, beginning with improvement of the country's economy."

DOSAAF organizations are making a worthy contribution to strengthening the Soviet state's economic and defensive power. They are actively publicizing military knowledge, teaching conscripts technical specialties and indoctrinating the young people in the spirit of the heroic traditions of the party and people and their armed forces. As a result the complement reaching the army and navy is capable of quickly assimilating the complex combat equipment and successfully fulfilling assigned missions.

Our civil defense is also performing an important role in development of communism.

Guided by the party and relying upon the powerful material foundation of developed socialist society and upon its increasingly stronger sociopolitical and ideological unity, the Soviet Armed Forces are dependably standing guard over the peaceful, creative labor of our people, serving as an indestructible bulwark of universal peace. The enemies of peace must know that we have something to defend, we have the people to defend it, and they have the means by which to defend it!

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ARMED FORCES

PHYSICAL TRAINING FOR COMBAT

Moscow KRASNAYA ZVEZDA in Russian 24 Jan 82 p 2

[Article by Maj V. Greben'kov, senior officer of physical training and sport department of GSVG: "Military Specialty and Physical Training: Conditioning for Combat"]

[Text] Since morning a gusty wind covered the sky densely with heavy stormclouds and lashed one's face with a cold drizzle. There was no question that personnel of the subunit commanded by Gds Sr Lt A. Smetanin had had bad luck with the weather. They had to make a 20-km night passage with an assault crossing of water obstacles, detect the "enemy," and determine his strength and weapons.

Many personnel of this subunit did not have to be accustomed to such a situation. They repeatedly carried out much more lengthy marches. Today's bad weather of course didn't scare them either, for they were scouts, which means that bad weather is their ally in performing the mission. But how would those young privates whose term of service was counted in weeks prove their worth today?

It was difficult to move to one side of the well-traveled roads with full combat equipment. Nevertheless, displaying remarkable endurance and resourcefulness, the scouts moved to the designated area undetected, discovered the "enemy" and passed on valuable information to the CP. It is true that the experienced men had to coddle guards privates A. Tarasov, I. Kravets and certain others along the entire route. These soldiers tried, but could in no way keep up with the main group.

"You yourselves found out today," emphasized the company commander in the critique, turning to the young soldiers, "that a scout must not only be bold and quick-witted, but also be hardy, adroit and strong."

Sufficient time has gone by since that day and now privates Tarasov and Kravets would not be recognized. Both have become versatile athletes. They did not forget the object lesson given the scouts by that memorable field problem. The commander also did not forget it in analyzing each subordinate's actions promptly and very thoroughly.

Gds Sr Lt Smetanin also managed to draw timely and correct conclusions: Heightened attention had to be given to improving the personnel's physical conditioning. It cannot be said that he had not been concerned with this before, but he obviously had not taken advantage of all opportunities. The officer realized that reserves for increasing subordinates' conditioning lie in organizing mass sports work in the subunit. Effectiveness of practices in wrestling, gymnastics, soccer and volleyball sections had to be raised considerably. Gds Jr Sgt A. Belyayev and Gds Pvt I. Britikov began to hold additional classes with colleagues to practice techniques. Every day each of the soldiers trained in the gymnasium, on the running track and on the obstacle course for two or even two and a half hours. The commander's calculation was borne out fully.

For the fourth year in a row the company commanded by Gds Sr Lt A. Smetanin is outstanding. In one of the last inspections held under very difficult conditions the staff officers now and then would assign the scouts more and more tasks, and they performed each one precisely and with great effect. One day the group which included Gds Pfc V. Anikanov and Gds Pvt S. Novikov negotiated a very difficult obstacle course so quickly and skillfully that even inspectors who had seen everything could not refrain from praise.

Guards privates S. Novikov, S. Kosolapov, A. Teplyakov and others operated no less confidently in the depth of "enemy" defenses. All of them demonstrated superb physical conditioning, which was natural: Every other private and NCO in the company now wears the VSK [military sports complex] first class badge, and every third soldier has become a first-category athlete. The officers set the example for the men. Company commander Gds Sr Lt Smetanin and Gds Lt A. Zinchenko are candidates for master of sports. The privates strive to emulate them and increase their physical conditioning from day to day. This has the best effect on their successes in combat training.

By the way, it is no secret for a majority of officers that the better mass sports work is arranged in the subunit, the higher is the servicemen's conditioning and combat readiness and the stronger is military discipline. For example, here is what tank company commander Sr Lt N. Makushchenko says: "As a rule, persons who are on friendly terms with sports, especially with athletic games, become experts in conducting fire." In my view, this is a very true observation.

Attention should be directed here to the following detail in particular: Those gunners who enjoy athletic games, especially handball, stand out for the best. It stands to reason that this is a topic of special research, but I can say with assurance on the basis of experience that playing handball develops the tankmen's necessary qualities such as good reactions, coordination of movements, heightened resistance to motion sickness, endurance, and a good eye.

Some officers complain that it is impossible to achieve outstanding results in combat and political training and high sports indicators simultaneously. But the commander of this tank company expresses the directly opposite opinion: "If soldiers are caught up in sports from the very beginning of service and work on their physical conditioning intensively, then it is enormously easier to join the ranks of foremost subunits."

Such an approach seems absolutely correct to me. I have had more than one occasion to be in this company and see how the tankmen not only practice techniques of working on the equipment to perfection during combat training classes, but also do not miss an opportunity to work in the integrated athletic compound set up right here during their breaks. They lift weights, throw grenades and negotiate obstacles. It is natural that the company headed by Sr Lt Makushchenko took first place in the unit based on results of the last review of mass work. The tankmen's successes in combat training are no less weighty.

We have many such subunits in the group of forces. Lately, as required by the CPSU CC and USSR Council of Ministers Decree "On a Further Upsurge in the Mass Nature of Physical Culture and Sports," physical training and sports are becoming an increasingly firm part of the soldiers' daily routine in the majority of units and subunits.

Nevertheless, there still are shortcomings in this important matter. Some commanders and political officers do not pay proper attention to physical training or the development of mass sports. In particular, this can be seen in the company commanded by Sr Lt Yu. Ryumin and in some other subunits. They have well organized athletic compounds, obstacle courses, and volleyball and basketball courts, but these facilities are poorly used.

All of us realize fully that physical conditioning is a most important component of high combat readiness and we must do everything necessary to ensure that this conditioning becomes stronger day in and day out.

6904
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ARMED FORCES

EDITORIAL KEYED TO COMMANDER TRAINING

Moscow KRASNAYA ZVEZDA in Russian 28 Jan 82 p 1

[Editorial: "Command Training"]

[Text] Each day of winter combat training is marked by the fervent desire of Soviet military personnel to celebrate the 60th anniversary of the USSR's foundation with new achievements in military work. An improvement in combat training quality and successes of subunits, units and ships in accomplishing the missions facing them and fulfilling socialist pledges are connected inseparably with a further improvement in the professional expertise of military cadres.

The officer command training system which has taken shape in the Army and Navy provides for a steady increase in their ideological-theoretical level and contributes to their development of firm practical skills in performing functional duties both in the position they hold and in the position one level higher. Results naturally are better where group exercises, short tactical training problems, practices and other forms of officer training prescribed by the programs are used with greatest effect, where the officers are taught under near-combat conditions and where they are taught what is needed in war.

Marxist-Leninist training holds an important place in the command training system. We must seek persistently to elevate the officers' ideological-theoretical and military-professional level further on the basis of good quality in fulfilling thematic plans for Marxist-Leninist training. Proper steps are taken where a differentiated approach is made to organizing ideological-theoretical training and where the problem method of training is adopted in practice. This contributes to the deeper assimilation of topics of study and an increase in the activeness of military cadres in a struggle to implement resolutions of the 26th CPSU Congress, to improve the combat readiness of units and ships, and to strengthen military discipline and regulation order.

A further improvement in tactical-weapons and tactical-special training of subunit commanders, which is the basis of field, air and naval schooling, is of fundamental importance. This assumes broad use of active training forms and methods in the command training system. That is the procedure, for example, in the Red Banner Tank Regiment imeni Leninist Komsomol commanded by Lt Col V. Lepikhov [Red Banner Belorussian Military District]. The majority of classes and practices with officers take place in the field here. Communications equipment is used and they practice lessons in organizing combat actions, the coordination of personnel and weapons, and control of their own, attached and supporting subunits and their fire in all kinds of combat. Short training problems on the terrain and on maps are held regularly during command training in the regiment, and a considerable part of the time is given to training officers to act in a position one level higher than their own. Many of them demonstrated the ability to exploit results of fire damage of the "enemy" expertly and to combine fire and maneuver in a tactical field fire exercise.

But the forms and methods of training officers and organizing command training do not yet fully meet modern demands everywhere. There often is a sketchiness and stereotypes in this matter. Time allotted to command training sometimes is not used for its intended purpose. Officer training is not always closely coordinated with missions being accomplished by subunit, unit and ship personnel. Some of them are insufficiently trained in the methodology of holding tactical problems and exercises involving field firing, or in work methods of organizing troop duties and strengthening discipline. This is inadmissible. We must step up supervision of officers' scheduled training and their independent work and elevate their sense of personal responsibility for their own training. To elevate this sense of responsibility, we must make fuller use of efficiency reports for officers, generals and admirals.

The development of a commander as the organizer and director of training and indoctrination of the personnel depends to a decisive extent on how thoroughly he knows provisions of field manuals, regulations and other guidance documents. Along with theoretical training, we must persistently develop the officers' practical skills in organizing combat actions and the training and indoctrination process, and maintaining firm regulation order and firm military discipline. A thorough study and imaginative application of the Great Patriotic War's experience is of permanent importance here. The experience of Exercise "Zapad-81" also has to become an effective factor in improving the training of military cadres.

A comprehensive improvement in officers' military-technical knowledge is one of the important tasks in their command training. Much depends on the ability of staffs in precise planning of the work for raising officers' professional qualifications. They must proceed from the assumption that each person authorized to have a class rating must confirm it or raise it one level during the year. Officers' successes in mastering modern equipment and weapons are more noticeable where they are taught during command training to act both day and night, under difficult geographic and climatic conditions. There must be a more active attempt to include officers in the competition for higher goals in military-technical training, to adopt the experience of the best specialists, and to demand a strict accounting of those who work to improve their professional expertise without the proper zeal.

The methods training of officers, especially young officers, requires further improvement. Training methods courses, instructional-methods and demonstration classes and exercises, and briefings--all forms of training must be subordinated to developing officers' firm methods skills and the ability to achieve high end results with the least physical input. It is important that the rule that the "superior teaches the subordinate" is followed strictly in training officers. Constant attention should be given to training commanders at all levels in the methodology of preparing and conducting exercises, particularly field fire exercises. Soviet pedagogics has a vast arsenal of forms and methods of working with people. Officers must be taught persistently the art of indoctrinational work and vigorous use of everything new and foremost born during combat training and socialist competition.

An elevation of the officers' sense of responsibility for their own training is an important task for commanders, political entities and party organizations. They are called upon to develop vigorously military cadres' initiative and imaginative attitude toward the job, to arm them with foremost experience, and to achieve total elimination of instances of oversimplification and indulgences in command training. Widespread preparation for the 6th All-Army Conference of Primary Party Organization Secretaries also should serve this purpose.

Persistent improvement in command training is one of the decisive conditions for a further increase in combat readiness of the Army and Navy.

6904
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ARMED FORCES

MILITARY NEWSPAPERS REVIEWED

Moscow KRASNAYA ZVEZDA in Russian 30 Jan 82 p 2

[Press review: "An Important Task of Military Newspapers"]

[Text] In Bukovina there is the village of Podvornoye, with a rich and interesting history. There was much sadness in the past. A bright, joyous page in the peasants' lives opened in 1940, when Bukovina reunited with the Soviet Ukraine, and when the Kolkhoz imeni Suvorov was set up in the village.

LENINSKOYE ZNAMYA [Leninist Banner], newspaper of the Southern Group of Forces, told the readers of the changes which have occurred here during the years of Soviet power in the article "Labor Like a Song." These changes are striking. The face of the village has changed above all. Brick houses with many apartments have crowded out the squat structures with straw roofs. Residents have at their service a culture club, movie theater, three libraries, a school of general education, a school of music, personal services building, branch communications office, dispensary, pharmacy, dining hall, trade center...

The article's author emphasizes that all these blessings did not come of themselves, but were created by the village residents. Their labor changed and was mechanized to the maximum. The people also changed. Many kolkhoz members have a secondary or higher education. Five candidates of sciences work in the village.

"Labor Like a Song" is one of the many articles printed in LENINSKOYE ZNAMYA under the rubric "The Soviet Way of Life." The following articles and essays also draw attention: "On Peace Street," about how the entire country helped Volgograd toilers restore to life a city demolished in the Great Patriotic War; "In a Friendly, Indestructible Family," about the combat brotherhood of soldiers of different nationalities; "Destiny of the Plant is the Destiny of the People," about the collective of the Dneprovskiy Metallurgical Plant... Just the list of articles indicates that the newspaper strives to take in a wide range of issues, show various facets of the Soviet way of life, and vividly propagandize the great achievements of socialism, which in the words of Comrade L. I. Brezhnev, have become "the flesh and blood of our reality."

The editors use various rubrics. One of them is "I Sing of My Homeland." Now during preparations for the 60th anniversary of the USSR's foundation, presentations by representatives of different nationalities and peoples of our country acquire special urgency. In telling of the successes of their republics, krays and oblasts in economic and social development, the authors emphasize that these successes became possible because an atmosphere of genuine collectivism, comradeship, high morality and moral purity reigns in our society along with a friendship of peoples rallied closely about the Leninist party, a friendship growing stronger from day to day. Articles, reports and essays not only give the facts and phenomena of our reality, but also interpret them or filter them through personal perceptions, as they say; and cite convincing examples and interesting details which give the telling a journalistic elevation, excitement and confidentiality.

An essay by Capt V. Shablinskiy entitled "Marfino Field" is devoted to the transformations on Belorussian soil. The author shows them in the concrete destinies of kolkhoz members of the village of Ozarichi. Special emphasis is placed on relationships of friendship, comradeship and brotherhood which were established among the people, relationships possible only under conditions of the socialist system. An episode described by Capt Shablinskiy, who visited his native village, is typical in this regard.

"I clearly recall that day when Viktor Devyatkin got sick. He needed urgent assistance. The oblast center telephoned:

"Expect an aircraft at dawn. Is there an airfield?

"An airfield," repeated the chairman. "Yes, yes... There will be!"

It was a freezing night. In the light of flaming bonfires, flashlights and headlights, bulldozers, vehicles and people with shovels leveled a field in preparing a landing strip for a medical aircraft. It was necessary for Viktor's wife to fly with him. But where would the children go?

"Come to me, children," said kolkhoz milkmaid Nina Shkal', nodding toward little Misha and Tanya. "You will be fine."

"The warmth of that freezing winter night still warms me," emphasizes the author. "The character of the Soviet citizen opened up then in its totality under very difficult circumstances. Even the outwardly imperturbable pilot was deeply touched, embraced elderly Anna Ivanovna Dorofeyeva standing nearby, kissed her and said with emotion: "What people, mama!"

That is the note on which articles were written by Azerbaijani Pvt G. Azimov entitled "Orchards Bloom in Azerbaijan" and by Dagestani Pvt A. Omarov entitled "Sun in the Palms."

LENINSKOYE ZNAMYA regularly informs its readers about how Soviet citizens are working to fulfill resolutions of the 26th CPSU Congress and quotas of the 11th Five-Year Plan. Editors strive to diversify the presentation of articles and take advantage of different genre.

Note also should be taken of the selections appearing in LENINSKOYE ZNAMYA entitled "Two Worlds and Two Ways of Life." In comparing the blessings which the socialist system gives to working people, the newspaper exposes the lie of bourgeois propaganda about the "society of general prosperity" and uses graphic examples to show the grievous situation and absence of civil rights of workers and peasants in capitalist countries.

KRASNYY BOYETS [Red Fighting Man], the newspaper of the Red Banner Ural Military District, also publishes many articles about our country's life. The weekly pages entitled "Working Step of the Motherland" should be mentioned above all. The articles tell about socialist competition for successful fulfillment of resolutions of the 26th CPSU Congress and quotas of the 11th Five-Year Plan, about raising labor productivity and so on. As a rule, essays and sketches about foremost workers of the Urals are printed in these pages. The essay "A Person of Imaginative Thought," about L. S. Dedyukhin, an active rationalizer and milling-machine operator of the Sverdlovsk Machine Building Plant imeni M. I. Kalinin, who was awarded the USSR State Prize for 1981, generates interest.

The editors of KRASNYY BOYETS periodically publish selections prepared by editors of oblast and republic newspapers. Not long ago a new rubric entitled "In the Constellation of Fraternal Republics" appeared in the newspaper's pages. Selection articles tell about the history of Kirghizia's development and republic workers' fulfillment of quotas of the first year of the 11th Five-Year Plan. At the same time the newspaper is not taking advantage of all opportunities for persuasive propaganda of the advantages and achievements of socialism in resolving social-political and national problems, in the development of culture or in establishing high moral values. Topics showing the genuine democratism of socialist society, the confidence of Soviet citizens in tormorrow, and the Soviet state's concern for the harmonious development of the individual are not being resolved.

It is true that last year KRASNYY BOYETS printed several meaningful articles under the rubric "Facets of the Soviet Way of Life," but this good beginning was not continued.

It must be emphasized that some articles of KRASNYY BOYETS are inexpressively printed and are oversaturated with dry statistics. The editors do not always succeed in translating these data into the language of emotional, persuasive images and showing the characteristic traits of our reality through people's destinies.

There also are shortcomings in the work of the editors of LENINSKOYE ZNAMYA. Articles of an agricultural subject matter predominate in the newspaper. The editors use some 15 rubrics, some of which duplicate each other, which disorients the readers.

As already noted, LENINSKOYE ZNAMYA and KRASNYY BOYETS regularly publish articles on the life of the country, but it is not always that the heroics of our days and the duty and grandeur of the person of labor--the builder and defender of communism--are revealed vividly and persuasively in the pages of these and a number of other newspapers.

It also must not be forgotten that the facets of the Soviet way of life and character traits of the Soviet citizen are manifested in the Army and Navy in military labor. The newspapers must tell the readers about this more fully and vividly and show the work of political entities, party and Komsomol organizations, and cultural enlightenment establishments in propagandizing achievements of the Soviet people in fulfilling resolutions of the 26th CPSU Congress and developing in personnel feelings of pride for our great Motherland, confidence as to the justness of our cause and the invincibility of socialism, and readiness to defend its achievements.

Active preparations now are unfolding everywhere for the 60th anniversary of the USSR's foundation. In the years of Soviet power the peoples of our country, joined in a single, friendly family, have achieved outstanding successes in economic and social development. One of the main results of the path covered is our Soviet way of life. One of the important tasks of the military press is to propagandize its features vividly and persuasively.

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JANUARY MAILBAG REVIEWED

Moscow KRASNAYA ZVEZDA in Russian 2 Feb 82 p 2

[Article: "KRASNAYA ZVEZDA's Mail"]

> [Text] The editors received 11,488 letters from readers in January 1982, 493 of which were published in the newspaper. There were 327 responses to KRASNAYA ZVEZDA articles.

Preparations for the banner event of the year--the 60th anniversary of the USSR's foundation--are unfolding more and more actively throughout our country. The January mail contained many letters about socialist competition for a worthy celebration of the glorious jubilee.

Capt A. Chumacherko reports from the Far East Military District: "'An excellent result for every training day'--that is the motto under which personnel of the mortar subunit commanded by party member Capt O. Vlasov are improving their combat proficiency. In a recent exercise held on mountainous and wooded terrain the mortarmen hit 'enemy' weapon emplacements with the very first rounds. Crews commanded by sergeants A. Sal'nikov and O. Belozertsev functioned excellently in practice combat and considerably bettered the normative time. Their success was no accident. Competition in this subunit from the first days of the winter training period was organized so that it mobilizes the personnel for high quality in accomplishing every operational training mission. An atmosphere of competitiveness is created in the crews' practical classes, the experience of those in the lead is studied and competition results are summarized regularly."

Many other letters have something in common with Capt Chumachenko's lines. Gds Capt O. Kalinchikov from the Group of Soviet Forces in Germany tells about the precise organization and capable direction of competition in the air defense battery commanded by Gds Maj V. Peredel'skiy, a master of combat qualification. Jr Sgt. R. Ibragimov from the Belorussian Military District reports on the successes in military labor of a subunit of military construction personnel.

These reports, and there were many in the editors' mail for January, indicate that Army and Navy personnel are full of fervent desire to complete training plans and programs of the winter training period successfully and master new heights of military proficiency.

At the same time, in telling about achievements in military labor, our readers write with party concern about the need to conduct an irreconcilable struggle against instances of oversimplification and indulgences in training, a formalistic approach to organizing competition in units and aboard ships, and an unconcerned attitude toward consumption of energy resources and other supplies.

As in previous months, the January mail contained many letters from frontlinesmen. They were about soldiers' fates and the heroism of Soviet citizens who defended the freedom and independence of their homeland in a mortal clash against fascism.

Unfortunately, however, the editors' mail is not devoid of alarming signals as well. Take the letter of war participant S. Golubkin from Moscow. For the second year now he has requested the Volgogradskiy Rayispolkom to improve his family's housing conditions. And all this time he receives promising letters: "Apartment repairs will be performed at a time convenient to you." But things are at a standstill.

A lack of proper attention in outlying areas often forces veterans to appeal to higher echelons and newspaper editors with lawful complaints and claims. For example, for a long while our reader, G. Grebenkin of Novosibirsk, was not able to exchange a temporary Great Patriotic War participant's certificate for a permanent one in the rayon military commissariat at his place of residence. It was only after the editors' intervention that the frontlinesman's request was satisfied and the persons who were indifferent toward him punished.

The exploit of war participants was great and their services unforgettable. Today the frontlinesmen's sons and grandsons continue worthily their combat traditions in the formation of armed defenders of the socialist Motherland. Letters from privates' parents, of which there are many in the editors' mail, are permeated with concern for the homeland's security and a strengthening of its defensive might. Addressing his son and his son's young colleagues, A. Bakulin, a worker at the Volgograd Tractor Plant, writes: "Soviet citizens have been living and working under a peaceful sky for almost 37 years. Our work is peaceful and creative and our thoughts of tomorrow are bright. For it is a great good fortune to be a builder of communism and implement party plans! But our concern and our Soviet reality are not to the liking of our foes. Again we are threatened with war from across the ocean, and plans are fostered for plunging us into the abyss of nuclear catastrophe. What do I wish to say to this? We are not easily frightened. Our country has something to defend and something to defend it with. Our sons, soldiers, come do your assigned job diligently. You in the Army steadily increase vigilance and learn weapons and military equipment thoroughly. Always be ready to offer a worthy rebuff to the enemy. And we workers on our part will respond to the intrigues of American imperialists with shock labor."

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ARMED FORCES

COMMANDER-SUBORDINATES RELATIONS

Moscow KRASNAYA ZVEZDA in Russian 26 Feb 82 p 2

[Article by Col V. Il'nitskiy: "The Superior and Subordinates: Sincere Contact"]

[Text] When it became known that the battery commanded by Capt L. Monakhov was among the laggards based on the year's results (several disciplinary infractions had been committed here), officers in the political department decided to study the status of indoctrinational work in it more thoroughly. As a result it was determined that there was not one infraction among all those which occurred in the battery during the year which would have been impossible to prevent. Just why wasn't this done? As an analysis showed, it was above all because the battery commander and other officers and warrant officers had a poor knowledge of their subordinates and performed individual work unskillfully.

The following incident is typical in this regard. Since Pvt V. Stefanyuk returned from a short-term leave his conduct and attitude toward service began to change for the worse. Not very long ago the private often had been set as an example, but now it was frequently necessary to criticize him: Either he would be late to formation or he would insult a comrade.

It was a long while before the battery commander pondered the reasons for the sudden changes in his subordinate's behavior. In his opinion they were superficial. As they say: The person had gotten what he wanted, spent some time at home and settled down. And when Pvt Stefanyuk committed an infraction of discipline Capt Monakhov punished him in all severity.

But even after that no changes for the better were noted. Political department officer Maj V. Baylov, who was working in the subunit at that time, became interested in Stefanyuk's conduct. Sincere interest and friendliness helped him get the private into a frank conversation. He learned that misfortune had occurred in Stefanyuk's home, and this gave him no rest, but by virtue of his character traits the soldier did not share his feelings with anyone.

What was Capt Monakhov's surprise when Maj Baylov told him about his "discovery." The political officer gave the young commander much sensible advice. Since then Capt Monakhov's attitude toward his subordinate has changed. Of course, as before, no one indulged Stefanyuk but at the same time both Monakhov and the other commanders did not miss a chance to have a heart-to-heart talk with him and support him with a good word or act. The private sensed this and his attitude began to change. His duties again took a turn for the better.

This story served as an object lesson both for Capt Monakhov and for other subunit officers, but why did it become possible?

When the first signals about deficiencies in the battery began to arrive in the political department and unit staff, they did not cause special concern: The commander was young, he would take up matters fervently and with a feeling of responsibility, and when he gained some experience he would take firmer control of the battery and everything would be all right.

But time went by and the deficiencies were not remedied. No, they had not been wrong about Capt Monakhov by advancing him to this position. And if the first hopes had not been borne out fully, the problem was that he was not being given effective help from his very first steps. But this is what he needed. As a matter of fact, before his advancement Monakhov had been a station chief and gave a considerable amount of his time to the equipment.

He came into a very different situation when he assumed command of the battery. He had many more people subordinate to him and all of them were different. Initially the young commander began with the equipment. He wanted to achieve its exemplary condition as quickly as possible. He used all measures to struggle for high quality of practices and classes as well. But Monakhov was attracted less to indoctrination work, perhaps because he sensed his weakness in these matters.

Once the unit political department received a signal that a roughness at times appeared in relationships of this battery's soldiers. They checked it and saw that all this was correct. Capt Monakhov was very perplexed: Just how did the privates tell about all this to political department representative Maj Baylov and conceal the deficiencies from him, their commander? The political worker told him the "secret": One must chat with people not only on the parade field in front of formation, but also in a friendly atmosphere, as equal to equal.

Officers of the unit political department and staff had to work a great deal with Capt Monakhov before he felt a genuine taste for a commander's pedagogics. They taught him with concrete examples and prevented him from making mistakes. Now the commander studied the people more thoroughly and heeded their opinions and advice. A frank, businesslike discussion was held in battery meetings about progress in fulfilling socialist pledges and about successes and shortcomings. Monakhov became convinced that this helps develop the people's conscientious discipline and feeling of responsibility and elevates each person's personality.

This story forces one to ponder [illegible] great deal, especially how important it is for any commander to be neare [illegible] people, know their strong and weak sides well and conduct individual work with them capably. Its secrets are not simple ones and only a person who has thoroughly learned the spirit and letter of military regulations, fundamentals of military pedagogics and psychology and the essence of experience of leading officer-indoctrinators masters them.

It seems not very long ago that Capt A. Rukin and Sr Lt G. Mechel' were evaluated as identically promising officers. But then each worked for a certain time in his own position and the advantages in the style of Sr Lt Mechel' were seen very clearly.

There is much remarkable work to his credit today. Together with subordinates he strives for outstanding success in competition for a worthy celebration of the 60th anniversary of the USSR's foundation. They have the best indicators in the unit for performance of operational readiness and range firings.

In short, the successes are apparent. Just what are their sources? Above all it is the fact that from the very beginning Mechel' was capable of being a military teacher.

In beginning to perform his duties he tried to find the so-called "bearing points" in people as quickly as possible. Both respect for people and exactingness appeared in him from the very first days. He heeded their opinions, took advantage of collective experience and relied on the party and Komsomol organizations. Sr Lt Mechel' saw one of his important tasks as being to take the subunit into the ranks of outstanding, but he did not flatter himself with thoughts about a sharp upward flight. The officer had good knowledge of the truth that easy and quick solutions will not bring real success. Therefore he began the movement to the objective with a thorough study of subordinates, their successes and deficiencies, and their strong and weak points.

Here is just one typical feature. Once Sr Lt Mechel' informed his subordinates that a meeting would be held in a few days at which they would discuss a plan for re-equipping the training facility, and he explained its essence briefly. When the time came and the operators assembled at the designated place, the commander asked them to express their viewpoint on how to accomplish the task more successfully. The answer was silence, which indicated that the people were not prepared for this kind of conference. Then the commander concluded: "We hardly will be able to discuss the plan well if you do not have your own judgements. We will have to postpone the discussion to another day."

This is not a very substantial fact at first glance, but in fact its meaning is deeper. In the very first days the new commander gave his subordinates to understand that it was important for him to know their opinions and he saw them as his assistants. This best encouraged the initiative of the young missilemen and their creative activeness. The commander supported and developed all the best in the people and found a way to their hearts along a bright path as it were.

Capt Rukin headed for the same goal along quite a different path (the subunit he commanded also pledged in that period to win the title of outstanding). The commander's work style was distinguished by a unique impulsiveness: There was maximum intensity in work prior to inspections and exercises, and then another drop. Another feature was typical of him: He managed people from a distance as it were. His appeals would be heard rather often: "Let's put the pressure on," "Let's try!" But these appeals did not really set the people afire.

And when this was pointed out to Rukin for the first time, he even was offended. It was allegedly an unjust rebuke, for he worked next to the privates and NCO's from morning until late at night hand in hand.

There seemingly is nothing here over which an objection can be made to the commander: He speaks the truth. But here is the problem. Much of what Rukin did in his attempt to learn his subordinates better was too much of a straightforward and often even a formal character.

How about individual discussions? There were many of them, but what can a discussion provide if it is held hastily or if it does not resemble a confidential conversation imbued with friendliness? The fact is that many of Capt Rukin's discussions were just this kind. It was no accident that his subordinates rather often "surprised" him with the unexpectedness of their acts.

When we analyze the work style of foremost commanders we are convinced each time that they have an inherent careful attention to the inner world of a person, the desire to understand his thoughts and feelings, and an ability to develop in him the best qualities and gifts and eliminate everything superficial and negative. All commanders, especially young commanders recently advanced to the position, must be armed with this valuable experience.

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EDITORIAL ON TRAINING UNITS

Moscow KRASNAYA ZVEZDA in Russian 27 Feb 82 p 1

[Editorial: "Training Subunits"]

[Text] Training subunits occupy a special place in our Armed Forces. Their primary mission is to train sergeants and petty officers capable of training and indoctrinating subordinates, as well as preparing specialists--privates and seamen--capable of mastering equipment and weapons. In arriving in a subunit or a ship's company and taking up their combat post in the squad or crew, the graduates of training subunits are called upon to introduce a spirit of efficiency and discipline into military collectives and contribute in every way to a strengthening of combat readiness of the units and ships.

Success in accomplishing these tasks depends largely on the quality and effectiveness of training and indoctrination work in the training subunit. The entire training and indoctrination process here must be arranged so that future sergeants and petty officers are armed with command skills in compressed time periods and taught the methodology of organizing classes and socialist competition and the ability of maintaining firm regulation order. Successes are achieved in indoctrination and developing in cadets the skills of mastering weapons and equipment primarily through a precise arrangement of the training and indoctrination process, its intensification, the high methods proficiency of training subunit officers, a modern training facility, and the maintaining of high efficiency and discipline.

The experience of a tank training regiment of the Transbaikal Military District where Comrade L. I. Brezhnev is an honorary cadet of the 1st Tank Company, is instructive. In telling about the daily routine of the garrison in Peschanka, where his military biography began in the middle 1930's, Comrade Brezhnev writes in "Vospominaniya" [Memoirs], that the chief elements for the cadets were the forced marches, classes in tactics, study of the equipment, driving tanks and conditioning their will. Leonid Il'ich concludes: "The tankmen who emerged from our battalion proved themselves to be hardened commanders during the patriotic war."

The present generation of officers, warrant officers, NCO's and cadets of the regiment is worthily continuing the grand traditions. Everything here is set up strictly by the regulations. Combat training and political indoctrination work are aimed at actively developing the cadets' high moral-political, combat and psychological qualities and their physical conditioning. The unit is staffed with experienced officers, warrant officers, NCO's and capable organizers of training and indoctrination. Commanders teach the soldiers to act under difficult conditions. In classes and field exercises they create an intensive situation typical of modern combat which prompts the cadets to take advantage of the full capabilities of equipment and weapons.

There are many such training units and subunits in the Army and Navy where high effectiveness of combat and political training has been achieved thanks to skilled organization of the training and indoctrination process and maintaining of firm regulation order. At the same time the level of organizational and indoctrinational work in some training subunits still is not up to modern demands. In particular, there are substantial shortcomings in the motorized rifle training battalion commanded by Maj V. Stepanov (Ural Military District). Cases of cadet training under oversimplified conditions have not been eliminated here and a separation of the personnel from classes is permitted.

Accomplishment of the tasks facing training subunits and units depends largely on the officer cadres with which they are staffed. It is important that these be politically mature, professionally competent commanders and political officers capable of training and indoctrinating subordinates skillfully. The commanders, political entities and staffs must show constant concern for perfecting their methods skills, making extensive use for this purpose of command and training methods courses, demonstration classes, instructional methods classes and briefings, and organizing extensive propaganda of foremost experience. A search for progressive methods and techniques of organizing and conducting classes is a very important task of commanders, staffs and all officers of training subunits.

A modern training facility is a very important factor for raising the quality of the training process in training subunits. Its effective use permits holding scheduled classes, independent work and consultations with cadets with the greatest return. Fuller use must be made of the capabilities of training equipment, particularly simulators, for developing and reinforcing the cadets' practical skills. Constant concern must be shown for raising the effectiveness of field classes, including field exercises of many days. The principle of teaching what is necessary in war must be implemented steadfastly in these exercises and in the training process as a whole.

Purposeful party-political work is called upon to serve to raise the quality of the training process and the effectiveness of socialist competition. Commanders and party organizations are obligated to develop initiative and an imaginative attitude toward work in officers, warrant officers, sergeants and petty officers of training subunits, help arm them with foremost experience, and achieve complete elimination of instances of oversimplification and indulgences in combat training. It is important to instil skills of indoctrinational work persistently in the cadets of training subunits and provide them with the methodology of organizing socialist competition and making the collective cohesive. The CPSU CC decree on the 60th anniversary of the USSR's foundation provides new impetus to all work in this direction. The party requires that an atmosphere of creative search, comradely mutual assistance, high responsibility for performing assigned tasks and an irreconcilable attitude toward deficiencies be created in every collective.

The quality with which young commanders and specialists are trained in the training subunit is determined largely by arrangements for selecting the cadets for them. This work is performed by representatives of training units together with military commassariats. It continues in the training subunits in the course of individual training as well. It is important to improve it comprehensively and raise the quality of manning training subunits and units. Also of importance is maintaining a constant tie between training subunits and those units and ships where their students serve.

Competition for a worthy greeting to the 60th anniversary of the USSR's foundation is gaining ever greater scope in training units and subunits under the motto "Reliable protection for the peaceful labor of the Soviet people!" A constant improvement in the process of training and indoctrinating personnel and an increase in effectiveness of competition in training subunits is one of the important factors for a further increase in combat readiness of Army and Navy personnel and successful accomplishment of responsible missions facing the Soviet Armed Forces.

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FEBRUARY MAILBAG REVIEWED

Moscow KRASNAYA ZVEZDA in Russian 3 Mar 82 p 2

[Article: "KRASNAYA ZVEZDA's Mail"]

> [Text] The editors received 12,054 letters from readers in February 1982, 409 of which were published in the newspaper. KRASNAYA ZVEZDA received 719 responses to its articles.

Last month the Soviet Armed Forces celebrated their 64th anniversary. In their letters KRASNAYA ZVEZDA's readers told how preparations for the national holiday went on in units and ships and about the successes in training, in service and in military work with which military collectives greeted the banner date.

"Under difficult conditions of the Siberian winter artillerymen of the foremost battalion in the unit, commanded by Gds Capt M. Litovchenko, are successfully mastering the art of modern combat and learning to hit targets with the first rounds," writes Gds Maj V. Pristennyy to the editors from the Transbaikal Military District. "Taking part in a tactical field fire exercise held on the eve of Soviet Army and Navy Day, they accomplished assigned operational training missions promptly and with high quality. The district commander gave high praise to the artillerymen's actions and presented the battalion commander with a valuable gift, and Gds Capt A. Krinichnyy, commander of the outstanding battery, with a certificate."

Reader Capt Tech Serv V. Khrebtikov from the North Caucasus Military District informs us about the successes in training with which aviators greeted the national holiday: "For five years in a row the squadron commanded by Gds Maj N. Yasnogorodskiy has confirmed the title of oustanding. Having joined in socialist competition for a worthy greeting to the 60th anniversary of the USSR's foundation, personnel are persistently struggling for the right to be called a subunit of heightened class."

There are many such letters in the editors' February mail. They persuasively attest to the fact that socialist competition which flared up brightly in the Army and Navy in honor of the 60th anniversary of the USSR's foundation under the motto "Reliable protection for the peaceful labor of the Soviet people!" effectively serves to achieve high indicators in the winter training period. The high appraisal given the USSR Armed Forces a year ago by the 26th CPSU Congress constantly inspires the Motherland's defenders in the intensive struggle for a further increase of combat readiness of the units, ships and subunits.

Readers' responses to the CPSU CC Decree "On the 60th Anniversary of the Foundation of the Union of Soviet Socialist Republics," published in the press, were received in the mail in the last days of February. The letters' authors report that Army and Navy personnel as well as all Soviet citizens greeted the historic party document with enormous interest and fervent approval.

"Readings aloud of the CPSU CC decree are being held in our unit's subunits," writes Sr Lt I. Kolesnikov from the Leningrad Military District. "Party members officers N. Abramov, Yu. Nikonenko, Ya. Ivanov and other propagandists and agitators are giving the talks entitled '60 Heroic Years.' The Motherland's achievements and the reality of her grandiose plans in building communism generate a feeling of pride in the soldiers."

"It was with excitement that I read the document of enormous mobilizing force," says Sgt (Res) A. Kolotiy, sharing his thoughts in a letter from Kiev Oblast. "And I recalled the recent years of my service in the Army. My combat comrades in formation are military drivers, as I was. They are driving the heavy vehicles somewhere now over the roads of Russia, the Ukraine and other fraternal republics. And they perform every assignment conscientiously. The Army taught us to take a responsible, state attitude toward an assigned task."

As in preceding months, the February mail contains letters by authors who told of achievements in military labor and who write with party concern about the need to conduct an irreconcilable struggle against instances of oversimplification and indulgences in training, about strengthening military discipline and regulation order, and about the formal and sometimes even indifferent attitude of some appointed persons to the servicemen's needs and desires. Here is a letter from Capt 3d Rank A. Mertsalov from Leningrad. For five years the officer has not been able to obtain a clothing certificate from his previous station in the Pacific Fleet. He repeatedly sought help through channels, including from Officer V. Gur'yanov. But things have been at a standstill until now.

A number of letters cite facts attesting that readers' complaints sometimes are examined with a violation of established deadlines, formal responses are given to them, and effective steps to remedy shortcomings are not taken promptly. There must be strict supervision and inspection of how the review of readers' letters is organized in outlying areas and whether or not appointed persons consider this to be an obligatory party matter.

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ARMED FORCES

CRITICISM AND FOLLOW-UPS

Follow-Up Reports on Criticisms

Moscow KRASNAYA ZVEZDA in Russian 4 Mar 82 p 2

[Article "Following KRASNAYA ZVEZDA Coverage: 'Shortcomings Were Repeated'"]

[Text] That was the title of the article by Col L. Derevyanko published on 14 November of last year. It told about deficiencies in the preparation and conduct of classes in Motorized Rifle Regiment "X" (Group of Soviet Forces in Germany).

As the editors were informed by the chief of the combined unit's political department, the facts were confirmed fully. Specific steps were taken to remedy the deficiencies noted by the newspaper. In particular, demonstration classes were held with regimental officers in weapons and tactical training during which special attention was given to the methodology of organizing competition in tasks and norms. There was stepped-up work of adopting the experience of the best gunners and foremost commanders. Steps were developed at a conference of unit political officers to raise the effectiveness of party-political work during combat training classes.

Deputy regimental commander Maj N. Kurapov was given disciplinary punishment for serious omissions in organization of the training process.

"A Personal Clearing"

That was the title of a satirical article by Col A. Drovosekov published on 24 January in KRASNAYA ZVEZDA. It told about the illegal cutting of trees in the green zone of Riga.

As the editors were informed by Maj Gen G. Parilov, deputy chief of the district political directorate, the article was discussed at a conference of district staff and directorate officers as well as at a meeting of members of the "Salyut" summer cottage construction cooperative. The criticism was deemed just.

Engr-Col Yu. Shpinev, chief of the district KEU [billeting directorate], was given punishment by the party commission of the district staff political department for abuse of official position and illegal woodcutting in the summer cottage sector--a reprimand with entry in the record. He repaid the damage done to the state in the amount of 600 rubles. Soviet Army employee F. Yagodkin, assistant chief of the district staff administrative department, was given a reprimand through party channels. He also was held answerable for material liability.

The district has taken additional steps to stop instances of an abuse of official position and supervision has been reinforced over observance of legality in individual construction.

"An Overcoat Without Sleeves"

That was the title of Maj V. Pustovoy's letter printed 19 January. As the editors were informed by Col P. Kovtun, chief of the trade directorate of North Caucasus Military District, the newspaper's article was discussed among the collective of the tailor shop where the officer's order was not filled for a long while and subsequently the material not returned at his request. The tailor shop manager was relieved of her position for serious deficiencies in the work. Steps were taken for full satisfaction of Maj Pustovoy's just demands.

Alcoholism Scored

Moscow KRASNAYA ZVEZDA in Russian 16 Mar 82 p 2

[Article by Col A. Drovosekov: "On the Penpoint: Gravitation to Drinking"]

[Text] The idea was attractive in its simplicity and promise. The simplicity was that at 1800 hours an ordinary military exchange dining hall was turned into an officers' coffeehouse, and the future promise was seen with the coffeehouse becoming a place of cultural leisure for young officers and warrant officers. Friendly gatherings, debates, meetings with interesting people, and other entertaining activities would be held. In a certain sense the coffeehouse would replace the club, inasmuch as there was no club in the residential area of the military post.

The idea was materialized in January 1979 by a military exchange order with the mutual consent of the senior officer of the military post and chief of the military exchange. This document was purely of local importance and the editors would not have known about it or its consequences had it not been for a letter from female residents of the military post. They reported that, as its creators foresaw, the evening officers' coffeehouse really did acquire a popularity, but not only among officers and warrant officers. It became a favorite place of meetings and a unique discussion club of avid adherents of drinking, who streamed here from the entire district. The letter's authors invited us to visit the coffeehouse to see the correctness of their information.

Taking advantage of the invitation, I began with a visit to military exchange chief Lt Col Ye. Mikhlin. Yefim Yakovlevich told very eloquently about the high purpose of the officers' coffeehouse, emphasizing in particular that very scant amounts of wine and cognac were sold there--some 2,000 rubles-worth per month.

"The arrangement of activities in the coffeehouse is not my doing," he said, anticipating possible questions. "My job is to ensure quality of food preparation and services and see that appropriate equipment is provided and sanitary conditions maintained at the proper level."

Yefim Yakovlevich's speech sounded convincing and generated the desire to cross the threshold of the officers' coffeehouse as quickly as possible. Unfortunately, this had to be done cautiously, because there was a semidarkness immediately across the threshold. In it one could make out well only the empty hangars of the cloakroom, which was piled high with boxes of empty bottles. A brisk trade was going on at the buffet counter and opposite it, in a narrow space between the lattice walls of the dining hall and again a stack of boxes with empty bottles, sat rather rumpled personages with an openly alcoholic appearance grouped densely around a table drinking beer.

"I barely pacified them," said the dining hall manager M. Mirgorodskaya, nodding toward them. "They were starting a brawl..."

The information led to reflections and generated questions. Answering them, Mariya Viktorovna described the situation at hand in rather great detail. Its essence briefly is as follows: The drunks had chosen the dining hall. They would drink vodka somewhere, then would come here to "taper off" primarily with beer. Sometimes they would get bored toward morning and it would often end with the militia having to be called to impose order.

"Excuse me, but this is not a tavern, but an evening officers' coffeehouse."

"Well, this drunken public rarely enters the dining room..."

It turned out that the coffeehouse was one thing and the buffet was something else. But who decided this? And finally, what is the public council of the officers' coffeehouse doing?

Surprise was the answer. There was no chance to hear about the council.

"A public council has not been set up," said Lt Col P. Grigor'yev, clearing things up. "This is our omission."

Generally no one is concerned with organizing leisure time in the coffeehouse. Weddings are held here and on major holidays there are friendly gatherings initiated by the women's council and the trade union MK [local committee]. On other days visitors are busy with wine and beer. It is a blessing that there is no shortage of either. The thought even arises automatically: Wasn't this why the coffeehouse was opened, so that it would screen the trade in wines and cognacs? The fact is that no matter how much the military exchange chief spoke about the great difficulty in reconstructing the dining hall as a coffeehouse, clearly not enough had been done. And what is there to say if production equipment has long been outmoded, glass containers are stored in the vegetable shop inasmuch as there is no other place for them, and there is nowhere to put ice cream at all: The refrigerator has not been operating since last spring.

"There is nothing but trouble with this coffeehouse," said Mirgorodskaya. "It it too costly, as they say. They increased theplan for commodity turnover, but forgot about everything else. And can I alone really impose order?"

The impudent behavior of very tipsy habitues and sots eloquently indicated that the dining hall manager could not cope with them alone. The forces were too uneven. Serious reinforcements were needed here, as well as serious work to make the coffeehouse correspond to its purpose. Therefore I would like to believe that the senior officer of the military post and senior political officer on this post as well as the military exchange chief will find an opportunity to familiarize themselves with the statute on officers' coffeehouses and do what they are obligated to do. Otherwise nothing worthwhile really will come from the good and promising idea. The idea was to have an officers' coffeehouse, but an ordinary tavern is what resulted.

Servicemen's Family Billeting Problems

Moscow KRASNAYA ZVEZDA in Russian 23 Mar 82 p 2

[Article: "Following KRASNAYA ZVEZDA Coverage: 'If One were to be Attentive'"]

[Text] That was the title of the article by Col F. Nikiforov, published on 28 January with editorial comments. The subject was unjustified difficulties in everyday living encountered by members of servicemen's families arriving at a new service location because of the impossibility of registering there until receipt of permanent residence. These difficulties, as stated in the article, were caused by the fact that Paragraph 4 of USSR Council of Ministers Decree No 678 dated 28 August 1974, authorizing the registration of citizens under exceptional circumstances not directly covered by law, was not being applied toward members of servicemen's families in a number of places.

The editors received numerous responses from readers indicating the urgency of the issue raised by the newspaper for a large number of populated points and the need to resolve this matter by centralized procedures.

As the editors were informed by Col Gen A. Zvartsev, deputy chief of the USSR Ministry of Defense Main Personnel Directorate, registration of servicemen and their family members is the responsibility of billeting-maintenance entities in the Ministry of Defense inasmuch as it is directly connected with providing them with housing. But considering the vital importance of the issue raised by the newspaper, where refusal of registration creates substantial difficulties for people in getting a job, medical treatment, and registering children in school and preschool establishments, the Main Personnel Directorate sent a special letter to personnel directorates (branches) of branches of the USSR Armed Forces, military districts and fleets. The personnel entities were told to give assistance to post commandants and the billeting-maintenance service in the immediate registration of servicemen and their family members transferred for service in conformity with existing law.

An appropriate instruction about registering servicemen and their family members before they receive permanent housing was sent to billeting-maintenance entities of military districts and fleets. The editors were informed of this by Engr-Lt Gen N. Likhanin, first deputy chief of the USSR Ministry of Defense Main Billeting and Maintenance Directorate.

In connection with criticism of a number of appointed persons who permitted red tape to be involved in registration of WO G. Krasnenko's family in Ufa, Lt Gen G. Gromov, member of military council and chief of political directorate of the Volga Military District, reported that the newspaper article was discussed at a course for chiefs of the district KECh [billeting unit]. Garrison commandants and their political deputies were instructed on ways and forms of resolving housing matters. The KECh chief of the Ufa Garrison was given strict instructions on the unobjectivity of the check of living conditions of WO Krasnenko's family. Instructions also were given to other appointed persons who not once had raised the question of registering garrison servicemen and their families who did not yet have permanent housing before the MVD [Ministry of Internal Affairs] of Bashkir ASSR.

The editors also received a report that the family of Capt A. Shefer had been registered in the apartment given it. The unit commander was instructed as to the need for a more attentive attitude toward the needs of families of officers and warrant officers and to resolve problems of their registration in conformity with the law promptly, including at the military unit address.

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COL GEN A. M. ZVARTSEV DISCUSSES OFFICER TRAINING AND SCHOOLS

Moscow VOYENNYYE ZNANIYA in Russian No 4, Apr 81 (signed to press 9 Mar 81) pp 27, 30

[Interview with Colonel General Aleksandr Mikhaylovich Zvartsev, deputy commander-in-chief of the Main Personnel Directorate of the USSR Ministry of Defense, by unknown VOYENNYYE ZNANIYA correspondent: "The Officer--A Heroic Profession"; date and place not given]

[Text] Military training schools enjoy enormous popularity among youth. Students, soldiers and sailors, and sergeants and master sergeants of enlisted and reenlisted service dream about becoming officers. The many letters arriving at the editor's office attest to this. Colonel General A. M. Zvartsev, deputy commander-in-chief of the Main Personnel Directorate of the USSR Ministry of Defense, replies to our correspondent on questions of interest to readers.

[Question] Comrade Colonel General, would you discuss the system of officer training in the Soviet Army and Navy?

[Answer] Under the guidance of the CPSU which considers the training of officer personnel as one of the most important tasks in strengthening the defensive might of the Soviet Union and raising the combat readiness and combat effectiveness of the armed forces, an orderly system has been developed for instruction in military training schools on command, political, engineering, technical and other types as well as individual specialists.

We have secondary and higher military schools, military institutes, and military academies. For examples, as a rule, only officers who have finished higher military schools and have served in the armed forces not less than five years study in the academies. The exception is the Military Medical Academy imeni S. M. Kirov where army and navy warrant officers, enlisted and reenlisted soldiers, and civilian youth are admitted.

[Question] Aleksandr Mikhaylovich, tell us even though briefly what subjects are studied in the military schools and what qualifications the graduates receive?

[Answer] Much is common in the training of military specialists of various types. A number of the most important requirements presented to officers, independent of their specialities, are determined by the class-political nature and the functions and historical purpose of the Soviet Armed Forces. First among them are the requirements for ideological-political, moral-fighting, and military and psychological qualities of officer personnel.

Of course, there are disciplines, courses, and subjects of the same name in the instructional programs of the command, military-political, and engineering-technical VUZ's. This is concerned with the social sciences (history of the CPSU, Marxist-Leninist philosophy, political economy, scientific communism and so forth), the many general scientific disciplines (mathematics, physics, and chemistry), and a number of military disciplines (operational art, tactics, the history of wars and the military art, and armed forces regulations). The majority of the forms, methods and procedures of instructional-indoctrination work is applied also in the same measure in all military training schools.

At the same time, the training of officers of various specialties has many special characteristics: Students and cadres study the entire complex of special sciences, and devote various time to mastering disciplines, courses, and subjects of the same name.

All graduates of military schools, institutes, and university schools are awarded the military rank of lieutenant, engineer lieutenant, or technical service lieutenant; and are given a diploma of the all-union example of higher or secondary military-special education and a badge for completion of a military training school.

[Question] Many readers of the journal dream about joining the Soviet Army or Navy and becoming officers. What are the terms of admission to military schools?

[Answer] Accepted to the military schools are civilian males, as well as soldiers, sailors, sergeants and master sergeants of all branches of the armed forces who have expressed a desire to become officers; those possessing high moral-political and work qualities; those having a secondary education; those suitable from a health standpoint for instruction in military training schools: and those successfully passing competitive entrance examinations. The age of those entering is from 17 to 21 years old. Enlisted soldiers are accepted for studies at the end of a two-year reenlistment up to the age of 23 years: and army and navy warrant officers at the end of two years of service in the positions of army warrant officers, navy warrant officers, or in officers' positions not older than the age of 25 years, and to higher flight schools not older than 23 years.

On the recommendations of the Soviet Army and Navy political organs or the Komsomol regional (city) committees, CPSU members and candidate members and Komsomol members having demonstrated an inclination for political work are accepted to the military institute faculty for training officers and political workers and to higher military-political schools.

Enlisted and reenlisted soldiers wishing to enter studies submit a report by command in the unit commander's name before 25 February of the year of matriculation; army and navy warrant officers not later than 1 December preceding the year of matriculation; and civilian youth by applying to the regional military commissariat at the place of residence or to the school commander before 30 April. Enclosed with the application are: autobiography, performance report from the place of employment or study, party or Komsomol performance report, copy of the document for secondary education (students from secondary schools, vocational-technical schools, and technical schools present a certificate of current progress), birth certificate, and three certified photographs (3 x 4 centimeters and without headgear).

Komsomol members recommended for studies by Komsomol regional committees (city committees) or political departments of military units and formations enclose with the application (report) their all-union Komsomol pass and have a preferential right for enrollment among other candidates having received identical grades on the examinations. The best factory workers, kolkhoz workers, and graduates of military-patriotic schools enjoy the very same rights.

Entrance examinations are conducted primarily from 15 July through 5 August. Military commissariats and unit commanders direct candidates to the entrance examinations at the invitation of school commanders. The candidates are provided a free trip and free meals and lodging upon arrival at the school.

The competitive entrance examinations to military schools and military institutes are conducted within the secondary school program on disciplines determined for each VUZ or group of VUZ's. Those entering higher military-political schools pass examinations on Russian language and literature (written), mathematics, history of the USSR and geography (oral). Candidates entering the L'vov Higher Military-Political School pass an examination on the Russian language and literature (oral) instead of an examination in math (oral), and they also go through a discussion on a chosen specialty--journalism or culturally enlightening work.

Passing examinations on Russian language and literature (written), mathematics (written and oral), and physics (oral) is established for those entering the Military Engineering Academy imeni A. F. Mozhayskiy and all higher military schools.

Those entering a military institute pass examinations on Russian language and literature (written and oral), history of the USSR (oral), foreign language (oral); and entering a military institute of physical culture--examinations on Russian language and literature (written), biology (oral), chemistry (oral), and physical culture and sports (practical).

Passing examinations on two subjects--Russian language and literature (written) and mathematics (oral)--is established for secondary military schools.

Besides this, candidates undergo a practical check for determining physical preparedness: soldiers in accordance with exercises of the USSR Armed Forces

Military-Sports Complex; civilian youth in accordance with exercises of the All-Union Physical-Culture Complex "Ready for Labor and the Defense of the USSR."

Persons decorated with USSR orders and medals for deeds or for attaining high results in combat or political training and also soldiers showing not less than one year of combat and political training as an exceptional worker [otlichnik] are accepted non-competitively upon receipt of favorable grades for the entrance examinations.

Persons having completed secondary school with a medal or a secondary special training school with a diploma with distinction pass the examinations only on one of the disciplines. Having passed the examinations on this discipline with an "excellent" grade, these persons are exempted from passing further examinations, but if they receive a grade of "good" or "satisfactory," they must pass examinations on the remaining disciplines also.

More detailed information about the admission rules can be obtained at military commissariats and at unit headquarters.

[Question] What guides the selection of a specialty? What mistakes is it necessary to avoid in determining one's vocation?

[Answer] The correct selection of a profession has great significance in the life of every person. A vocation is formed under the influence of many factors. In my opinion, the main one is the person's realizing the importance of one or another business. In particular, therefore, it is essential that young people, having chosen the honorable profession of defenders of the homeland, understand correctly the mission of the Soviet Armed Forces.

Of course, it is necessary to confer with military instructors and with commanders or veterans of the armed forces.

Making the Leninist principles of military construction a reality, the Communist Party devotes constant attention to strengthening the defensive capability of our country, and that was stressed again by the 26th CPSU Congress with particular clarity. Thanks to the concern of the Leninist party, our armed forces are equipped with first-class combat equipment and weapons. Outstanding people, who are surrounded by the concern of the party and the people, serve in them because that can be a more honorable and responsible commission--to protect the conquest of October and to stand on guard of peace and socialism.

Having chosen the military profession, young people must remember that this is the profession of the strong, the courageous, and the bold. It is necessary to prepare ones self in advance. The DOSAAF organizations and schools and the workers of the military commissariats render great assistance in this. I am cetain that, having made a considered decision, young people do not regret the fact that they dedicated their life to the military service. This is a goal worthy of Soviet patriots.

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USE OF ROCKET LAUNCHER BY AIRBORNE TROOPS

Moscow VOYENNYYE ZNANIYA in Russian No 8, Aug 81 (signed to press 10 Jul 81) p 27, outside rear cover

[Article by Engineer-Colonel V. Knyaz'kov: "The Rocket Launcher"]

[Text] The military transporter lifted ponderously from the landing strip, climbed and turned onto its course. The airborne subunits aboard had the mission of destroying a concentration of "enemy" manpower and combat equipment in the deep rear.

The command to make ready sounded. The paratroopers stood up from their seats and faced the cargo hatch. Now everyone's attention was turned to the light signal panel. When the word "Go" lit up, parachute platforms bearing combat equipment were dropped, and then the paratroopers leaped out.

One after another, a supporting canopy and then a stabilizing canopy appeared above the platforms. Their job was to deliver the heavy cargo to the ground intact.

Suddenly beneath the main canopies of the parachute system, just above the platform itself, there was an instantaneous flash and some puffs of smoke: The soft-landing rockets fired. The platform touched down, and the main canopies slowly began to settle and lose their shape.

Soon the paratroopers touched down one after another. Without losing time they began removing the railing and fasteners from the platforms bearing RPU-14 rocket launchers.

Let us go back to the history of the Great Patriotic War. What could have been landed by parachute in those days? Only the paratrooper. With what was he armed? An automatic rifle, a paratrooper's bayonet and a folding shovel.

Years went by, and the rescue parachute pack invented by the Russian engineer G. Ye. Kotel'nikov underwent such astounding change that the airborne troops obtained the possibility of dropping combat vehicles, armored transporters, self-propelled guns, mortars, rocket launchers and other equipment.

It stands to reason that the missions of these troops are incomparably more complex today as well. In fact, nothing could favor success in combat more than the menacing chatter of, for example, the RPU-14 deep in the enemy rear. RPU stands for "Rocket Launcher" and the number 14 is an abbreviation for its caliber--140 mm.

The weapon system is intended to launch high-power M-14-OF turbojet fragmentation shells and M-14D smoke shells. Owing to this it could be used for a diversity of missions, including annihilation and suppression of enemy manpower and fire weapons located in the open or in light shelters.

What fighting qualities does the RPU-14 possess? First of all it is highly maneuverable and it has a high rate of fire. The rocket launcher may be airlifted, and it can be parachuted down as well as unloaded from a parked aircraft. When previously loaded with 16 rockets, it can be quickly towed by a tractor to its fire position. Incidentally the towing speed can reach 65 km/hr over good paved roads.

The launcher can be towed across shallow fords if the bottom is sufficiently firm. It is fearless of upgrades and downgrades. It all depends on how good the tractor's brakes are.

In the heat of battle, of course, when every minute is precious, towing the RPU-14 with a tractor would not always be justified. The crew could roll it small distances by hand on its own. And this is not surprising, since without shells the launcher weighs 925 kg. So that it could be rolled easier and faster, Soviet designers foresaw a small but important part--a special wheel of small diameter. In travel position it is secured to and carried by the launcher, and when necessary it can be removed and placed beneath the trails. Thus the launcher becomes a three-wheeled cart.

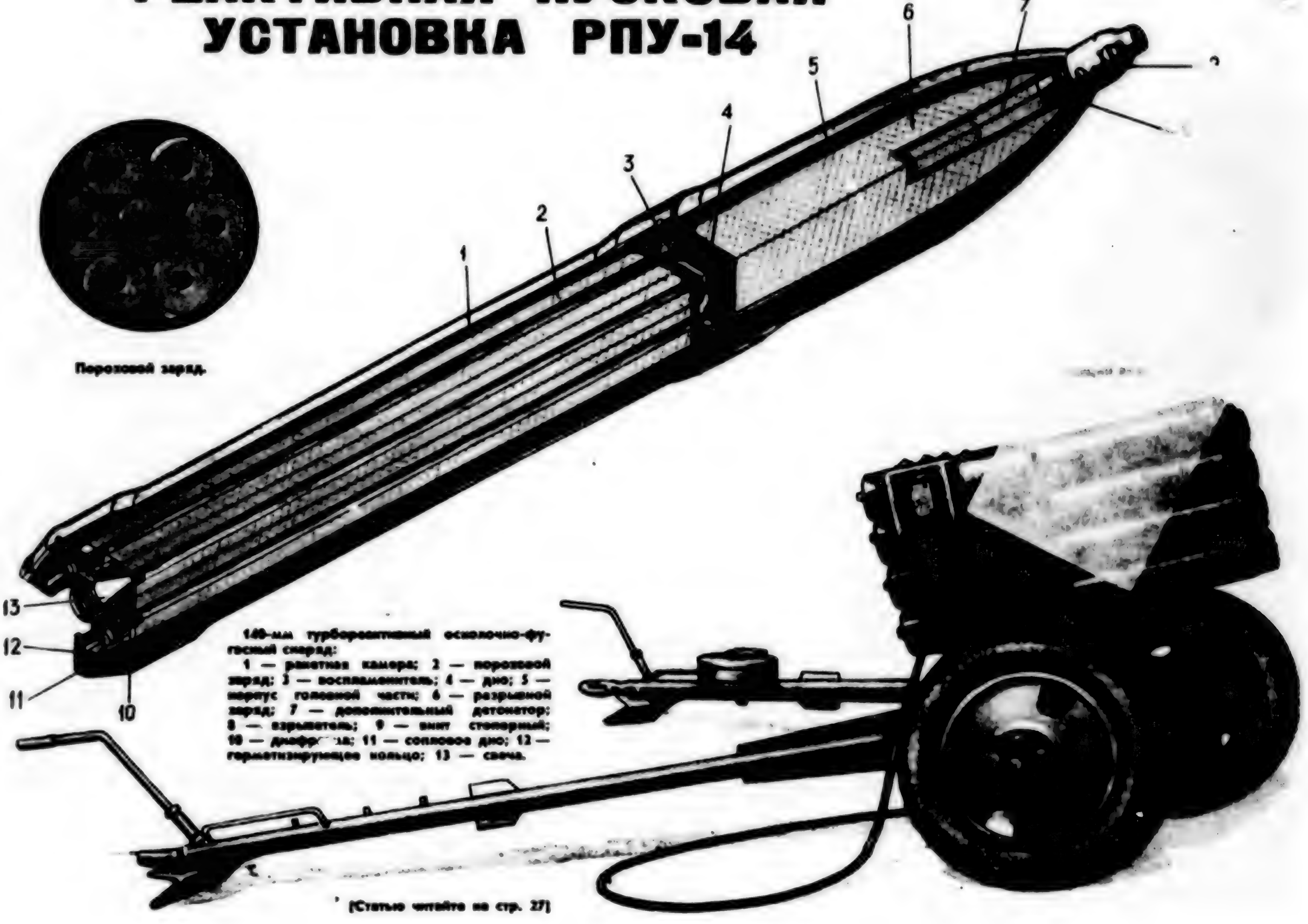
This maneuverability of the RPU-14 rocket launcher has great significance, inasmuch as it permits its quick movement depending on the situation.

Now imagine that the launchers have been dropped and that they have just arrived at their appointed place. How much time would it take to prepare each one of them for fire? Not much. As soon as they assume their fire position and the command to fire is issued, the launchers could open salvo fire at the enemy for a range of up to 10 km in literally just a few minutes. In this case it is very important that the RPU-14 can be fired with practically no preparations and without the need for setting up a fire position. All that is necessary is to jam the trail spades into the ground.

A trained crew can shift a launcher from travel position to combat configuration in 2 minutes. It can load it in 3 minutes. The loading of a 16-barrel launcher would require the crew to carry 16 rockets (each weighing 39.6 kg) to the launcher and install the detonators.

One of the important combat qualities is the launcher's rate of fire. It is significantly greater than that of an artillery piece. Take as an example a 122-mm howitzer. Its rate of fire is six rounds per minute--that is, one projectile is shot toward the target every 10 seconds. But the RPU-14 is a weapon capable of salvo fire. Take a look at the accompanying figure: Notice the 16 barrels, each of which contains a projectile. They cannot all be launched simultaneously. This is impossible owing to considerations of design and operation. In other words it is incapable of a classical artillery salvo, in which projectiles leave all barrels at

РЕАКТИВНАЯ ПУСКОВАЯ УСТАНОВКА РПУ-14



Пороховой заряд.

140-мм турбореактивный осколочно-фугасный снаряд:

1 — ракетная камора; 2 — пороховой заряд; 3 — воспламенитель; 4 — дно; 5 — корпус головной части; 6 — разрывной заряд; 7 — дополнительный детонатор; 8 — взрыватель; 9 — винт стопорный; 10 — диафрагма; 11 — сопловое дно; 12 — герметизирующее кольцо; 13 — свеча.

(Статью читайте на стр. 27)

Key: Left: Powder charge. Center: 140-mm turbojet fragmentation shell: 1--rocket chamber; 2--powder charge; 3--igniter; 4--base; 5--warhead body; 6--explosive charge; 7--supplementary detonator; 8--fuse; 9--set screw; 10--diaphragm; 11--nozzle base; 12--sealing ring; 13--spark plug. Right: General appearance.

the same time. This process is somewhat extended in time for a rocket launcher--8-10 seconds. Simple arithmetic would show that the RPU-14 does have a good rate of fire--two rounds per second.

The high rate of fire is responsible for another important combat property--high effectiveness of the launcher's fire. Naturally, a salvo against a target means a sudden, strong fire strike. The practically simultaneous explosion of a group of shells within the target area stuns the enemy, causing him both material and moral harm. And there can be no doubt as to the havoc it does produce: It is one thing for individual shells to explode here and there, but it is entirely something else when the thunder of explosions by dozens of shells merges into a continuous roar, and the surrounding earth is thrown up as a solid wall.

The high effectiveness of salvo fire is also promoted by the suddenness of a strike. For example a 122-mm howitzer, having fired a round, could not deliver a second round until 10 seconds later. Moreover it will do less harm to enemy infantry than the first shell. Infantry is not going to wait around for the second shell to burst: In those 10 seconds at its disposal, it could take some sort of steps to protect itself. What can a man do during this time? He can, for example, take cover in the nearest pit, trench, shell crater and so on, or simply lie down on the ground.

A rocket launcher is capable of salvo fire at a very high rate--a round approximately every half a second. This is how surprise is achieved in a target strike. The enemy does not have enough time to take cover in shelters or to run out of the zone of fire. Moreover the target area is engulfed for 8 seconds by a powerful rain of fire and metal from 16 projectiles, the total weight of which is more than 630 kg.

The RPU-14 has a simple layout. Consider the design of the launcher guides. We do not have the I-beam girders of the "Katyusha's" of the Great Patriotic War. Each guide resembles a mortar barrel. This is a so-called tubular guide. The 16 tube-barrels--four rows of four tubes--make up the guide cluster.

The tubes are intended to guide the flight of the projectiles, and they serve as containers when the unit must be moved in loaded configuration. The caliber of the barrel is 140.3 mm, and its length is 1,150 mm.

Now let us turn to the M-14-OF fragmentation shell. The term "fragmentation" hardly needs any explanation. It is the same as that applied in classical artillery to rockets capable of destroying a target not only with fragments but also with the shock wave created by the explosive charge. The way these rockets act on hitting the target depends on the kind of fuse used. A projectile fused to explode immediately, on just barely touching an obstacle, has fragmentation action, while when it is fused to explode following a certain delay and the projectile is able to dig its way into the ground a certain distance, it behaves as a high-explosive charge.

Another important property of the projectile should be noticed: As it moves along its trajectory, it rotates about its longitudinal axis. Why was it designed in this way? In order to reduce scattering and thus raise the accuracy and grouping of fire.

The physical picture of the phenomenon can be easily explained. When a projectile rotates relative to its longitudinal axis it behaves as a gyroscope. Recall an ordinary children's top, and then the essence of this property would become understandable. However, the engineering behind this design can vary. Many readers, I am sure, know something about artillery pieces. Open the breech mechanism and look into the bore, and you will see screw threads. The copper driving band on the projectile cuts into this thread, and owing to this it rotates about its longitudinal axis. Now it would not be difficult to guess where this discussion is going. What we need to do is "force" the rocket to rotate as it flies on its trajectory in the same way that an artillery projectile does. Then it would fly stably, and the scatter of the projectiles would be lower.

This technical idea is quite enticing, without a doubt, but how do we embody it in the design? Of course, it would make no sense to replace the launcher guides by gun barrels. Designers suggested a wise solution: Imparting rotation to the projectile by the rocket engine itself, which has not one but 10 nozzles. The axis of these nozzles is tilted 22° relative to the long axis of the projectile. This produces a significant angular velocity--several tens of thousands of revolutions per minute.

As at a thermal electric power plant, in which steam striking the vanes of a turbine causes the rotor of a generator to turn, here as well the powder gases from the rocket engine do similar work. As it flies, the rocket turns itself relative to its axis. This similarity did not escape the specialist. This is the way they came up with the term "turbojet rocket." With its fuse it is 1,085 mm long. It can be fired to a range of 9,810 meters within a broad interval of temperatures--in both 40° frost and 50° heat.

As we can see, the RPU-14 is a typical representative of Soviet rocket artillery. What makes it distinct from other weapons can be summaried by two qualities--it can be airlifted and it can be dropped by parachute; in turn, these qualities have fundamentally altered another combat possibility of the unit--maneuverability. In view of this, the rocket launcher possesses high tactical-technical characteristics, and it is capable of performing diverse, complex missions in modern combat.

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ANTI-AIRCRAFT FIRE DISCUSSED

Moscow VOYENNYYE ZNANIYA in Russian No 4, Apr 81 (signed to press 9 Mar 81) pp 25-26

[Article by Engineer Colonel V. Knyaz'kov: "Firing on an Aerial Target"]

[Text] Any one who has held a hunting rifle in his hands or, more to the point, has shot at wild fowl on the wing probably did not suspect that his brain at the time had solved a complex mathematical problem in a very few fractions of a second.

This is no exaggeration. This task has a precise scientific-technical name. Expressed in engineering language, the so-called predicted task in this case concerns the resolution of the approach and precise encounter of two bodies moving in three-dimensional space: e.g., the charge of pellets and the ducks. But from elsewhere it looks extraordinarily simple: the duck is caught in the gun sight, passes the aiming point, and the hunter smoothly squeezes the trigger.

It is observed that speed of such an aerial target is not great--several tens of kilometers per hour. However, in order to hit the flying duck, they do not fire a bullet but a charge of pellets; and, as a rule, for this they hunt with a double-barrel gun. They do this so that the reliability of hitting the target will be maximal. So how does one hit a speeding aerial target, such as a modern fighter-bomber which reaches a speed of 2,000 kilometers per hour or more? The task is incredibly difficult.

Judge for yourself. While the second hand, which is jumping rapidly about the dial makes one revolution, such a fighter can approach the target by 30 kilometers. This means that readiness to open fire must be very high. But that is not all. One would think of what significance is a second? In our earthly human understanding it is an extraordinarily small interval of time, but in the sphere of modern armed combat it acquires significance. The above-mentioned target, flies a half kilometer per second. Therefore, it is located in the zone of anti-aircraft fire for a very limited time.

That is why the technical problems of developing an anti-aircraft weapon to be quick-acting and able to hit modern aerial targets, are time-consuming. Despite the complexity of the problem, simply speaking the designers use the hunting principle. An anti-aircraft weapon must be quick-firing and, as far as possible, multi-barrel; and its guidance so perfect that it can make the greatest number of aiming shots in a very short interval of time. The maximum reliable possibility of hitting the target can be assured only under such conditions.

The appearance of the anti-aircraft weapon is an objective and natural fact. In fact, already at the beginning of World War I, aircraft attacks presented a real threat to the forces and objectives of the rear. Initially, combatting them was simple. Conventional field pieces were placed on special mountings for firing upwards. Understandable, such fire was not very effective. Later, the development of a special system of anti-aircraft artillery was begun. The 76 mm anti-aircraft gun developed by Russian designers in 1915 at the Putilovskiy plant can serve as an example of that.

A means of aerial attack was developed, and anti-aircraft artillery was perfected also. They began to develop not only small caliber (20-60 mm) but also medium (60-100) and even larger (over 100 mm) caliber.

During World War II, the effectiveness of anti-aircraft guns grew markedly. The density of fire increased. Combat with aircraft began to be conducted at night also. Invaluable newsreels informed us of individual combat episodes:

...The light blue "swords" of the searchlights are flashing. Cutting through the nocturnal darkness, they intersect and suddenly converge on one point, tenaciously holding on to the aerial pirate. Immediately the firing tracer trails stretch out to it and the lights of distant air bursts dance in the sky. And there is the fascist aircraft already, leaving a smoke trail behind it, rushing towards the ground like a rock. A hit. A resounding explosion rolls across the neighborhood--the end of a hated enemy.

A brief reference. The highest density of anti-aircraft artillery during the defense of Moscow, Leningrad, and Baku was 8-10 times greater than during the defense of Berlin and London. Altogether, during the years of the Great Patriotic War, our artillery shot down more than 23,000 enemy aircraft. This speaks a great deal about the selfless and skillful actions of the Soviet anti-aircraft crew members and their high proficiency; and at the same time about the high combat quality of the domestic anti-aircraft artillery.

Soviet designers developed quite a few artillery anti-aircraft systems having tactical-technical characteristics. At the present also, various types of anti-aircraft artillery are found in Soviet Army and Navy armament which fully meets the modern requirements presented to a weapon of such a branch.

...Dust rises in clouds over the roads of the fields. According to the training plan, the troops are making a long march. Columns of military equipment move in an unending stream. Tanks, armored personnel carriers, infantry combat vehicles [BMP's], artillery towing vehicles, and rocket launchers must all arrive at the designated place precisely at the calculated time.

And suddenly, sharp like a shot, comes the command:

Air attack!

But what is this? The columns do not stop, and more than that they increase speed and the distance between vehicles. From the side one can observe that several armored vehicles have behaved somewhat strangely. The massive towers that begun to stir, the barrels pointed sharply upwards, and the roar of the discharges that has blended already into the continuous rumble. These are the anti-aircraft installations that have opened fire on the aerial enemy. In addition to not stopping and being openly in motion in the traffic, they cover the columns of troops from an air attack. Such combat quality is extremely valuable in modern combat.

Let's become a little better acquainted with this interesting armored vehicle. Its exact designation is ZSU-23-4. This abbreviation is deciphered thusly: ZSU is anti-aircraft self-propelled installation; 23 is the caliber in millimeters; and 4 is the number of barrels. Its purpose is to provide protection of various objectives, order of battle for forces on the offensive, defense, an encounter battle, and marching columns from enemy aircraft flying at altitudes up to 1,500 meters. Well, what if the situation in a battle takes shape such that it is required to open fire on ground targets? Will the anti-aircraft installation be able to do this? And here it is just as effective as against air targets. Effective fire is provided up to 2,500 meters.

Naturally, the 23 mm combined automatic anti-aircraft gun is the basic fire power of the ZSU. And, of course, its combat capabilities present the greatest interest.

The rate of fire is very high--3,400 rounds per minute. Calculated roughly, this means that 56 shells each second are rushing to meet the aerial enemy! This is the same peculiar charge of "pellets" which we spoke about when the hunting principle is applied in connection with the design of anti-aircraft systems. But in this case, i.e., in this system, it is case literally in an avalanche of metal. If the mass of the shell in round figures is 200 grams, then the mass of this "per second" stream of metal totals 11 kilograms.

Firing is conducted, as a rule, in short bursts of 3-5 or 5-10 shots per each barrel; but if the target is high-speed, then up to 50 shots per each barrel. Of course, because of this a high density of shells is created in the target area and a reliable hit is finally attained.

The unit of fire is 2,000 shots. Two types of shells are used and both are combined. The first has the marking OFZT which means that the shell in this case is fragmentary, high-explosive, incendiary, and a tracer; the second is marked BZT for armor-piercing, incendiary, and a tracer.

The barrels are belt fed. It is interesting that the belts are made up in sets in a particular order: three OFZT shells, the fourth a BZT, then again three OFZT shells, the eighth a BZT, and so forth.

How does this anti-aircraft self-propelled installation "take aim"? Figuratively speaking, intelligent instruments perform this automatically. They continuously solve one problem--the so-called impact problem. The barrels of the gun are directed not at the point where the aerial target is located at the moment of the shot, but to another which is the so-called lead point. It is in front on the track of the target's movement. The shell must fly to this point simultaneously with the aerial target. The anti-aircraft installation strikes without adjustment fire: each burst is calculated and conducted as if against a new target. Moreover, it goes for a hit immediately.

However, before a target can be hit it must be seen. The eyes of the anti-aircraft installation is its radar station (RLS). Invisible radio beams penetrating space conduct a target search, observe it, and then tenaciously hold it, the specialists say--automatically tracking the target and forming a line of sight. What is more, it assists in determining the target coordinates and the range of it.

The RLS antenna is well observed in the illustration: it is installed on a special tower over the turret. The antenna is properly made up in the form of a parabolic reflector, and the observer sees a flat cylinder (ring) on the turret. It is specially done this way. The antenna reflector is covered by a screen from radio-transparent material which protects it from damage, from atmospheric sedimentations, and so forth.

The brain of the anti-aircraft installation is its computation device (SRP). Essentially, this is a small on-board computer which continuously solves the problem of shell impact with the target. In this case, designers can give a more precise determination: the SRP works out lead angles during vectoring of the gun towards the moving target. Thus the line of fire is formed.

It is relevant to say several words still about one intelligent instrument, or more precisely group of instruments, which form the system for stabilizing the line of sight and the line of fire. It is a very effective system. In fact, when the anti-aircraft installation is rushed with unit orders of battle, reels from side to side, rocks, and shakes, the RLS antenna continues to follow the target just the same; and the gun's barrels are directed along the line of fire. Moreover, a 280 horsepower engine easily carries the armored vehicle. A tracked propeller provides high-speed movement, maneuverability, and increased rough-road performance.

Are there any limitations on employing the ZSU-23-4 in combat because of atmospheric or other external conditions? There are no such limitations. Due to the use of the RLS, the anti-aircraft installation can conduct fire by night as well as by day, during poor visibility, and in complicated meteorological conditions. Also it can move at any time of day and even in darkness; the infrared instrument provides visibility at a distance of 200-250 meters.

Although the crew is four persons. The commander leads the combat members, and he performs the most responsible duties. The driver-mechanic controls the movement of the combat vehicle. But two other crew members possess those military specialities which are the result of the military-technical revolution. One of them is the controller-search operator and the other is the range operator.

It is observed that specialists thought out very successfully the layout of the combat vehicle and its design as a whole. For example, it is not necessary for the crew members to leave the vehicle in order to move the gun from a mobile to a combat position. The commander or the controller-search operator does this directly from their operating seats. They control the gun and conduct the firing.

Such an innovation als draws attention to itself. The anti-aircraft installation is equipped with tank navigational gear. This is done so that it will be possible to control continuously the position of the vehicle on the terrain and the traversed route. So how does this reflect on crew operations? The commander and the driver-mechanic, once again not exiting the vehicle, have the possibility of orienting themselves on the terrain and continuing the course of travel in accordance with the map.

The problems of providing crew safety were well thought out. When conducting fire the crew is separated from the gun by a vertical armored partition which protects them from bullets and fragments, and also from fire and powder gases. Besides this, a special lock was envisaged: if just the driver-mechanic's hatch is open (he forgot it!), then it is impossible to conduct firing.

The designers also showed special care for the crew in connection with combat operations in conditions where the enemy is using nuclear weapons. In this respect, the ZSU has definite durability. Atomic defense gear and fire-fighting equipment are included in its design. A filter ventilation system, which cleans the outside air from radio-active dust, takes care of the microclimate inside the combat vehicle. It creates excessive pressure that does not allow the contaminated outside air to get inside through possible cracks.

And besides, the anti-aircraft installation itself possesses definite ability to keep alive. It is armored, and its junctions and accessories are reliable. As for maneuverability of the vehicle, it is comparable to similar tank characteristics.

Now let's simulate such an episode. An anti-aircraft installation is covering a column of troops on the march. The RLS is conducting a circular scan and observes an aerial target. Who is it? Friend or foe? An inquiry immediately follows to determine the nationality of the aircraft. No answer. Then the commander has only one decision--fire!

But the enemy uses cunning, maneuvers, and attacks boldly. And then at the very height of battle the RLS antenna is cut off by a bomb fragment. What is to be done? Who needs "blind anti-aircraft equipment"? Nevertheless, the distinguished service of the native designers consists of the fact that they envisaged not only this, but also more complicated combat situations.

Even if the RLS, the SRP, or the stabilization system breaks down, the ZSU remains combat effective all the same. The controller-search operator will conduct firing using the anti-aircraft stand-by sight, and he will be able to insert target leads, determining them by means of target angle of approach rings.

Broad automation of anti-aircraft artillery is an essential process. Examining the combat resources of the ZSU-23-4 anti-aircraft self-propelled installation, we are convinced of this. This combat vehicle is an effective means of combat with an aerial enemy.

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PACIFIC FLEET COMMANDER IN CHIEF INTERVIEWED ON NAVY DAY

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) pp 1-2

[Interview with Admiral V. V. Sidorov: "Combat Watch of Pacific Fleet Seamen"]

> [Text] Our correspondent interviewed Admiral V. V. Sidorov, commander of the Red Banner Pacific Fleet on the eve of USSR Navy Day.

[Question] Comrade Admiral, please tell us how Pacific Fleet seamen marked the 26th CPSU Congress? With what new patriotic initiatives did they respond to its decisions?

[Answer] As with all Soviet people, Pacific Fleet seamen met the congress of their party with honor. Last year most of the fleet's ships and units completed their combat training missions with high grades. The seamen honed their military proficiency persistently at oceanic latitudes. The crew of the large antisubmarine ship "Petropavlovsk," which initiated the 1980 socialist competition in the navy, was especially successful in fulfilling its pledges. This crew was awarded the Pennant of the USSR Minister of Defense for bravery and military valor, and it was enrolled in the Honor Roll of the USSR Armed Forces. The ship commander, Captain 2d Rank A. S. Kuz'min was a delegate to the 26th CPSU Congress.

During the preparations for the congress the crews of the submarines and surface ships, the airmen and the marines had to undergo harsh tests of combat maturity many times. And as a rule they underwent these tests in the best traditions of the war years--they struck their targets with the first salvo, shot and launch.

The glorious traditions of the seamen of the Red Banner Pacific Fleet live in today's noteworthy military deeds of the personnel. The party and government gave proper credit to the labor of the fleet's soldiers, rewarding many of them with state awards.

But noting the positive, we do as the party teaches us, we also critically assess the results and increase the demands upon ourselves. We understand that we must maintain high combat readiness with a consideration for the complex military-political situation in the world and in the Far East.

In addition to ideological maturity and indoctrination of naval seamen in a spirit of patriotism and internationalism, concern for the technical training of soldiers must be a continually increasing object of concern, which would in the end permit us to raise the effectiveness of ship cruises at sea, reduce fuel consumption and lengthen the time weapons and equipment are used between repairs.

Discussing patriotic initiatives, we should say something about the fleet Komsomol. Let me cite just a few of its initiatives. The Komsomol organization of one of the atomic submarines initiated a review of the work of Komsomol organizations aboard ships named after the Komsomol. The Komsomol organizations of one of the fleet's formations appealed to all youth collectives to begin a shock watch in honor of the 50th anniversary of the Komsomol's sponsorship of the navy. Moreover we are preparing to give an honorable welcome to the 50th anniversary of the Red Banner Pacific Fleet, which will be celebrated in April of next year.

[Question] What is unique about serving in the Pacific Fleet? What specific requirements are imposed on the personnel?

[Answer] In my opinion service in our fleet is unique in that ours is an oceanic fleet, and moreover it sails four oceans, since our ships proudly carry the USSR naval flag at all latitudes of the World Ocean.

The personnel must work hard. After all, our seamen sail both at polar latitudes and in the vicinity of the equator. This requires special abilities, a strong body and courage. Yes, courage. Despite the fact that the fleet possesses powerful ships such as the antisubmarine cruiser "Minsk" carrying airplanes and helicopters aboard, and atomic submarines capable, like Jules Verne's "Nautilus," of circumnavigating the world beneath the sea, the ocean still remains the ocean, a menacing element which can be taken on only by people who are strong and courageous. And these are precisely the qualities that distinguish the Pacific seamen.

Our fleet is the USSR's outpost in the Far East, and its soldiers serve in direct proximity to the borders of Maoist China, which is pursuing a policy openly hostile to the Soviet Union. All of this requires Pacific seamen to display constant high political alertness and endurance, the ability to skillfully use weapons and combat equipment, keep the latter constantly ready to repel any aggressor and always be ready to stand in defense of the USSR's state interests at the motherland's first call.

[Question] Comrade Admiral, please tell us a little about yourself. There are many young people among our readers dreaming of serving in the navy, and naturally they are interested in what it takes to become a commander.

[Answer] Dynasty is the concept that comes to mind. I am from a dynasty of military servicemen. My father was a regular officer. He fought in the Civil War and he served in the Far East. While still a child, I got used to the hard life at military posts, the frequent moves and the changes in our situation. Even before I started school I was well acquainted with military terminology, commands, and alarm signals, and then in my military science lessons I acquainted myself with infantry weapons and learned how to use them. When I graduated from school I had no doubts as to what I wanted to be and where I wanted to go to study. I firmly decided to become an officer and to follow in my father's footsteps.

The war made things happen faster. I enrolled in the Pacific Higher Naval School imeni S. O. Makarov as a cadet in January 1942. Like my comrades, I longed to reach the front, I submitted requests to be stationed on the front one after the other, and the rejections came in just as fast. My superiors had to make a sober judgment: our country's trial of war was to be long and hard, and because of this, they had to concern themselves seriously with training military personnel. And we the cadets, meanwhile, did not waste our time either. We studied the equipment, weapons and our specialties persistenly, and we improved our physical fitness.

My first apprenticeship was with ships of the Pacific Fleet. During this time we were fighting a war with imperialist Japan. This was a real test of courage, endurance and steadfastness. The teachers were good also--officers knowing and loving their work and naval service. After graduating from school, my development as an officer began in the Baltic Fleet, aboard trawlers. Since that time I have held many posts in the Baltic, Northern and Pacific fleets.

Once I counted up that I have made about a dozen moves, but to me, each new assignment was more important than the next. I made an effort to learn, to deepen my military and political knowledge. I did not ignore the details, knowing that nothing is unimportant in the service. Whenever things went hard for me--which did happen more than once--I did not turn inward, instead appealing for assistance from fellow servicemen and senior comrades.

I would also like to say that efforts to raise one's knowledge of ideology and theory are very important. It is no wonder that we say that the strength of a soldier lies in his ideological maturity, irrespective of what he is, a seaman or an admiral. I was fortunate to take part in the proceedings of the 26th CPSU Congress among other delegates. But even now, as with all Soviet people, I am attentively studying its proceedings, trying to determine what I could do to implement its historic decisions.

As far as what it takes to become a commander, I would not be wrong in saying this. Ask any graduate of a naval school what he wants to be, and he will say, or necessarily think: "A commander." They say a seaman who does not dream of becoming an admiral is a bad seaman. But the dream is only half the battle; much has to be done to reach the dream. And this depends only on each one of us.

[Question] Seamen and petty officers who had undergone training in DOSAAF naval schools prior to being drafted are now serving aboard ships. What can you say about these seamen; to what do the schools turn most of their attention in the training of specialists for the navy?

[Answer] From their first days of service, graduates of such schools tackle the study of military affairs with great zeal, they quickly master complex combat equipment, and they become exemplary soldiers.

Take for example Petty Officer 1st Class Vladimir Yermolko on the missile cruiser "Vladivostok." He graduated from the Vladivostok DOSAAF Naval School in 1978. The knowledge he acquired in the school helped him to quickly learn naval affairs and the specific features of naval service, and to endure its burdens more easily.

He passed his tests ahead of schedule, he began serving his watch independently, he obtained the qualifications of a specialist 2d class, and 6 months later he became a specialist 1st class.

All of this shows that DOSAAF naval schools are a dependable assistant to the navy in training young people for military service.

It stands to reason that these schools must continue to upgrade the quality of the training afforded to specialists for the navy, and they must require cadets to master the fundamentals of naval affairs more deeply, remembering that the level of combat readiness depends in many ways on the technical training of the cadets and the extent to which they master the equipment.

Even in peacetime, military service is associated with heavy burdens; it requires will, courage, firmness of character, the strictest discipline and high moral and physical maturity. These qualities must be imparted persistently to the future defenders of the motherland.

Pride for the heroic deeds of our fathers and grandfathers must be constantly nurtured in the students. Their desire to follow the example of senior generations and to prepare morally to fulfill the honorable duty of a citizen of the USSR--protecting the motherland with weapon in hand--must be elicited.

In conclusion I would like to say something to young people who will be serving in the fleet. We await you, dear comrades, we will meet you with honor, and you will immediately sense the great concern of the commanders and senior seamen, who will help you to get on your feet as quickly as possible.

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FLIGHT TRAINING ABOARD 'MINSK"

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) pp 2-3

[Article by Ye. Aleksandrov and V. Dedov]

[Text] Its appearance is totally out of the ordinary: With its downward tilting sharp "beak" and fractured wing planes and with what seem at first glance to be disproportionately skinny and disproportionately long-legged suspension arms, the airplane recalls some fantastic creature. This impression is intensified all the more so when the craft straightens out its wings as it slowly turns on deck. A stream of hot gases thrusts downward, onto the deck, the craft trembles, it rises slightly, outstretching its "legs," it separates from the surface, and for a second or two it hangs suspended in the air, as if in a moment of indecisiveness, rocking back and forth there, enshrouded by a semitransparent cloud. And suddenly it rushes forward, climbing steeply. The hatch covers close, the landing gear folds in, and right away the dynamic lines of the airplane become discernible, as it increase its speed unstoppably. Soon it transforms into a dark spot dissolving in the canopy of the sky. And on the carrier deck, where it is stained by smoke-black spots, the next craft is ready to go. It is going to be a hard day today aboard the antisubmarine cruiser "Minsk." The pilots will be flying combat training missions.

Aircraft appeared aboard warships prior to World War II. Today they--helicopters predominantly--can be seen aboard various classes of ships, mainly antisubmarine ships (not to mention aircraft carriers). But the "Minsk" is an unusual ship. In addition to being outfitted with artillery and depth charge racks, missiles of various purposes and other "conventional" weapons, vertical take-off and landing airplanes are one of the principal forms of its armament. Possessing enormous speed and maneuverability, these craft are capable of striking targets with high precision at sea, on land and in the air, which significantly expands the combat possibilities of the ship. Understandably control of these craft requires high proficiency from the pilot: The "airfield" moves, and it rocks, and moreover the dimensions of the "landing strip" have nothing in common with those on land. The craft control equipment also differs significantly, especially in relation to take-off and landing. Absolute dependability and constant performance of all of the craft's systems and mechanisms acquire extremely great significance.

In ordinary conditions, on land, every air regiment has its own special subunit, a TECh (technical maintenance unit). It is responsible for maintenance, repair, adjustments and other operations that the aircraft engineers and technicians cannot handle. Moreover there are subunits that maintain the airfield, deliver ammunition and fuel, tow the airplanes and so on.

An air combat support unit--the BCh-6--is foreseen aboard ship. Aboard the "Minsk" it is headed by Engineer-Captain Sh. Mukhtarov. The son of a regular military pilot and of a participant of the Great Patriotic War, Shamil' dreamed of aviation since childhood. He was unable to become a pilot, but he did become an aviation engineer. "Now even I can't figure out what I am--a seaman or an airman," laughs Shamil' Dzhavatovich. He is joking. Of course he is a seaman, as with everyone else aboard ship, irrespective of specialty. But at the same time he is an aviation specialist with the top qualifications.

Broad is the range of missions performed by specialists of the BCh-6. The airplanes are usually parked in a dependable hangar. Prior to flying they are raised to the deck by an entire complex of so-called hangar-deck mechanisms and devices. Moreover, in contrast to conditions on land, here the POL, nitrogen, oxygen and other necessary gases and the ammunition storehouses are all aboard ship. All of these supplies are delivered right to the place where the airplanes undergo refueling with the assistance of special mechanisms, pipelines, elevators, pumping stations and so on.

Everyone who serves aboard ship must know not only his business and his department, but also the ship as a whole, and participate in missions affecting the entire ship, to include maintaining its viability. But a soldier in the BCh-6 must also know the equipment intended for maintenance of the airplanes and for support of flying.

Warrant Officer 2d Class V. Grachev, a specialist 1st class, is said to be among the best. While the 26th CPSU Congress was going on in Moscow, Grachev, an outstanding naval seaman, was unanimously accepted as a candidate member of the party. Volodya is an electrician, in charge of the flight deck electric power supply system and the light signal complex. This is a very important area of responsibility: searchlights, marking lights and illumination on the flight deck and the barrier, flashing and code lights of the ship. All must work faultlessly, at any time and in any weather.

Petty Officer 2d Class Yuriy Simonov heads a squad of tractor drivers. This ship carries even vehicles such as these. They are intended to tow airplanes on deck and in the hangar, and they outwardly resemble a truck from which the cab has been cut off: The tractor must maneuver among numerous mechanisms, and it must be characterized by very high maneuverability. It is not easy to drive this vehicle, especially on a rolling deck. "After driving it, driving an ordinary car, and on land for that matter, is no work at all," said Yuriy. Simonov is a driver 2d class, as are all drivers of his squad.

"And all I ever do is train, I have never had the fortune of doing what I'm supposed to do," jokingly complains Senior Seaman Auginus Kyastusis, a distinguished naval seaman. Such is the nature of his work: Things are best when there is nothing to do. The explanation for this is quite simple: Auginus is a firefighter. He has powerful deck systems at his disposal capable of instantly beating flames away from an airplane or from the deck whenever necessary. The need has so far not arisen, and a certain amount of credit for this belongs to distinguished naval Seaman Kyastusis and his comrades.

Seaman Bazhenov is an aviation mechanic 1st class. Kostya performs maintenance on helicopters, and no complaints have ever been leveled against the quality of his work.

There are many such lads. It is no accident that the BCh-6 is one of the leaders of the socialist competition aboard ship. True, the subunit lost its lead in the last stage--its rivals were strong, but this did not dishearten the lads. The collective has firmly resolved to win the outstanding title in the year of the 26th CPSU Congress.

Naturally when flying goes on, maximum attention is devoted to flight support. But flying is not an end in itself, but only part of the overall training mission of the ship. While those who interact with the pilots do what they do, the rest go on with their work. Specialists of the BCh-5 strictly monitor the work of numerous mechanisms: A ship that cannot move is not a ship, and at such times it is more important than ever to ensure the ship's irreproachable maneuverability. Missilemen and gunners man their combat posts. Radar and sonar station operators attentively view their screens: The "enemy" may appear from land, from air or from beneath the water. Signalman Vladimir Tilinin is just as attentive at his post. Keeping his hands on his binoculars, he keeps a watchful eye on the horizon in the observation sector apportioned to him.

Why an observer with binoculars, when there is a radar antenna overhead that can "see" hundreds of miles? Is this not an anachronism? No. The apparatus may be good, but the seaman's watchful eye is needed today more than ever. Radar and sonar may be jammed, and a submarine periscope may be made of "radio-transparent" materials. But watching the sea and sky is only part of Petty Officer 2d Class Vladimir Tilinin's responsibility. His "domain" includes the signal lights and of course the traditional flags, the portable radio set and the rangefinder. Vladimir is one of the best specialists in the unit. If only his friends from Moscow Model Printing Office No 1, where he worked before being drafted, could see him now.

And a friend of Vladimir's--Seaman Oleg Zibzibadze--is now serving the watch at another post. Before being drafted he was a monitoring and measuring instrument repairman. Here he has mastered the signalman's profession, and his civilian occupation has come in handy: Oleg is a member of an unofficial repair team.

We enter the control and dispatch center of the "Minsk." Everything here is as it should be--the flight leader, the duty officer of the on-duty fliers, and operators; but here also we find the ship commander and a watch of seamen responsible for the cruiser's maneuvers. This is understandable: First of all both the airplane and the "airfield" must maneuver during take-off at sea, and second, in the final analysis one person is responsible for everything aboard ship--the commander.

Flickering pulses appear one after another on the greenish screen of the early warning radar: The airplanes were returning from their assignments. Suddenly the first blip on the screen of the short-range radar appeared, and soon the unaided eye could see a black spot that gradually acquires the features of a swiftly approaching airplane. The voice of the flight leader is calm: "No 27, you're on the glide path, up 2, course...." But the way conversation in the wheelhouse abruptly stopped gives you to understand that the most critical moment has arrived.

Once again the airplane undergoes its metamorphosis. Before one's eyes it changes its shape, its "legs" extend out, and the craft looks like a bird with ruffled feathers negotiating the wind. It hovers over the stern, precisely over the landing circle, it lowers gently to the deck, and touches down with a bounce in its step. And, shooting out a parting tongue of flame and enveloping itself in a cloud of smoke, it slowly moves over the deck to where it is awaited by the technicians, refuelers and armament specialists, who will prepare it for its next flight.

The radio message is carried throughout the entire ship: "Senior Lieutenant Vladimir Bayev has been certified for solo piloting, and he has completed his first combat flight with a grade of excellent. In behalf of the entire crew and myself personally, I congratulate Comrade Bayev and wish him further successes in service. This is the commander speaking."

Meanwhile the next craft approaches for its landing. Today is a flying day aboard the "Minsk."

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ASW TRAINING ON THE 'PETROPAVLOVSK'

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) pp 4-5

[Article by Engineer-Colonel Ye. Pateyuk and Engineer-Colonel V. Revuka: "They Serve Aboard an Antisubmarine Ship"]

[Text] The large antisubmarine ship (BPK) "Petropavlovsk" reached the open ocean. The ship virtually slid over the water, leaving a smooth, foamy wake behind its stern. The deck trembles slightly, and the engines roar evenly and dully. The "Petropavlovsk" is cruising in so-called economy gear: It is saving its fuel and the power of its turbines for a swift lunge, whenever it may become necessary. The radar antennas rotate untiringly. The flag, raised aloft, flutters in the wind.

One can clearly see the bow end of the deck through the window of the wheelhouse--it is now completely unpopulated, and the waves follow one another in an endless succession, merging at the horizon into a continuous smoky-gray band. In the wheelhouse, each is occupied with his own business. The silence is disturbed on rare occasion by short reports and by commands that are just as brief. And when silence takes over again, it is not at all difficult to imagine that you are alone, and that you, Aleksandr Bakharev, are solely responsible for, and in charge of, this steel giant, which responds so nimbly to the helm and races forward at the speed of a car (and it is far from full steam at the moment).

Bakharev stands at the helm with no evidence of tension, casting his glance from time to time to the compass card. But internally, he is like a wound spring, ready to receive and execute commands at any second. Aleksandr is a veteran seaman: He has several long ocean cruises behind his back, he is a specialist 1st class and a distinguished naval seaman, and he is commander of not just an outstanding department, but the ship's best. Credit for the fact that all seaman in his department are also top-class specialists belongs not only to the warrant officer and the commander of the navigation division, Senior Lieutenant Grafkin, but also to him, Petty Officer 1st Class Bakharev.

Nevertheless Aleksandr, though he would not wish to admit this even to himself, is agitated. The problem is that his principal specialty is an electrician. But one of the items of his personal pledge in the past year was to master the helmsman's occupation. He reached his goal. And today, the way the circumstances came together, it was his turn to take the watch at the helm.

Aleksandr's second specialty is not just for fun. Besides those who just recently melded with the crew, all seamen aboard the ship know two or three specialties. It is very important to the ship's combat readiness for every crewmember to have a qualified back-up, and hopefully more than one. This is the goal aspired to by all subunits, by all ships. Last year seamen of the "Petropavlovsk" earned the oustanding crew title, and now the honor had to be perpetuated. Outstanding means serving as an example to all. Captain 2d Rank Aleksandr Sergeyevich Kuz'min, commander of the "Petropavlovsk," was a delegate to the 26th CPSU Congress in February. Such a great honor for the ship! The seamen proudly saw their commander off to the congress, and they listened with excitement to his words at the highest forum of our party, to the promise of the armed forces delegation to the congress and the Central Committee that army and navy soldiers will do everything to ensure the fatherland's security. The promise was made in behalf of all soldiers, meaning of course the seamen of the "Petropavlovsk" as well.

The crew unanimously decided to mark the year of our party's 26th Congress with even greater successes in combat and political training, confirm the ship's outstanding rating and complete all combat training missions with grades of at least good and excellent. The status aboard ship following spring training was 18 masters of military affairs, 80 percent specialists 1st and 2d class, and three-fourths of the divisions and 80 percent of the groups and batteries designated as outstanding. Consider, however, that once every half year part of the first-term seamen retire into the reserves to be replaced by young people who must undergo training, and be worked into the routine. But meanwhile the ship's combat readiness must never decrease. And so the seamen adopted this pledge in winter: By the day the congress opened all young seamen of the fall draft were to be prepared for certification as specialists of not less than 3d class. The promise was kept, and naturally the seamen are proud of this. The young people are learning from the experience of others at every post and in every compartment. Aleksandr's mind takes a moment to sort through the friends standing watch together with him.

Kostya Denisov, of course, would never miss a chance to provide some training to his wards. He is an exceptionally business-like lad, Petty Officer 2d Class Denisov is. He is still in his first term, but it is already his second year at a warrant officer's post--chief of a sonar squad. Sonar is a highly important specialty. And Kostya is a virtuoso specialist (it is no coincidence that he is a musician as well: A delicate sense of hearing is paramount to a sonar operator!), and he leads his squad well.

What about Vasil'yev? Nikolay also successfully performs the responsibilities of a squad chief, and he is one of the best operators. He came to the fleet after secondary school without a specialty, but now--this was a topic of conversation at the last summarization of training results--he operates a computer with the skill of a qualified technician. It is hard to believe that he can work the keyboard so well: The compartment is dark, there are more than 90 keys, and Nikolay plays them "by Braille," never looking down from the display and the instruments. Petty Officer 2d Class Vasil'yev has already raised the qualifications of four of his squad to 2d class.

Somewhere way down below, in the engine room, beside remote control panels Aleksandr's namesake, Chernyshev, shares his experience with young seamen.

"Hold spirits, devils from below"--in the past, these were the names applied in jest to mechanics and stokers, and in general to all seamen working in the engine room. But today, enter the BCh-5, or the electrical and engineering division, and you would think you have stepped into a large power plant or the laboratory of some institute: The rooms are spacious and brightly lit, the air is fresh, and there are instruments and automatic blocks all around. The appropriate specialists have appeared as well. Chernyshev is a remote control specialist.

"This year we're shooting for not less than outstanding!" Petty Officer 1st Class Ganzhin, also Bakharev's namesake, declared at a general meeting. Sasha is a seaman gunner and a marksman, and his department has been held up as an example many times for its knowledge and its maintenance of the combat equipment. And no matter what the situation, he never gets depressed, he is always able to cheer everyone up with a joke, and raise their mood.

Yuriy Gavrilov, secretary of the ship's Komsomol committee, sits at his desk during his free time in his small cabin for two. He is pondering over a letter. Children from the school in the village of Baskakov, Gagarinskiy Rayon write: "Many of our boys dream of serving in the navy. We want to know more about service at sea...." Yuriy glanced at the map and smiled: "Smolenskaya Oblast is so far away...." He recalled his own school years, which were generally not that long ago. He also dreamed about the navy since childhood, and he stubbornly prepared for admission to the school. He made it. But even as a cadet he realized that the most important thing in naval service is work, persistent work, sometimes very hard and far from always romantic. What is romantic, for example, about a major ship clean-up detail? This is more than just helping Mom sweep the floor at home. In a major clean-up detail all compartments, decks, ladders and pipes--in short, everything on the ship--are washed (in the navy way, so that not a speck of dust or a spot remains!). The holds are cleaned, everything including personal articles is taken out, and everything is aired and disinfected. And this is done by the entire crew, all without exception: warrant officers, petty officers and seamen. Such is the requirement of the regulations.

Anyway, how should he begin his reply to the children? Should he tell them how much they need that foundation of knowledge that is laid in school? It is very difficult to begin service aboard a modern ship, one embodying all of the latest achievements of science and technology, without this foundation.

There was a knock on the door, and a tall, broad-shouldered lad peeked into the cabin--this was Petty Officer 1st Class Aleksandr Kolomeytsev, a squad Komsomol organizer and one of the secretary's most active helpers. In the last party meeting Kolomeytsev, a distinguished naval seaman and a specialist 1st class, was accepted as a CPSU candidate member.

"Comrade Lieutenant," the petty officer reported with a smile. "The volleyball team wants you to join them for practice. The court is ready and the players are all there. Can you join us?"

Volleyball aboard a warship, on a cruise? Quite so. And there is nothing unusual about this. When a ship goes to sea, naturally it is not on a tourist cruise. It steams along an appointed course, ready to execute combat missions at any moment (even the form in which the commander makes his report says so: "The ship is ready for cruising and for combat!"). Combat training, study of the materiel, and hard training exercises in conditions maximally close to those of real combat, in all weather and at any time of the day: This is the principal mission of a crew on a cruise. But this does not mean that all seamen spend their time perpetually at their combat posts. The crew is divided into shifts. While one is on watch the other shifts occupy themselves with political and special training, cultural work or, finally, just simple rest.

One of the favorite leisure pursuits is sports. Sports provide active rest, they are an excellent way of keeping physically fit, and they improve the physical and volitional qualities which seamen need as much as they need air. Of course, it is not easy to engage in light athletics on deck: It would not seem to be a problem when the ship is in the harbor, but nevertheless we find that the ship possesses all of the facilities for wrestling, boxing, weightlifting and even gymnastics. It is no accident that 87 percent of the "Petropavlovsk" crew are military-sports complex badge-holders, and 90 percent are ranked sportsmen. "Petropavlovsk" seamen have long held the first place in volleyball in the formation, and the deputy commander of BCh-5, Captain-Lieutenant V. Domashevskiy, is a member of the fleet team. Many play volleyball, and they practice hard while ashore, and even at sea, while on the move when the situation permits. The court, of course, is not all that conventional: During practice, the helicopter landing pad is fenced off with netting. And the ball is tied to a long capron line. Strange as it may seem, it works, and how!

Evening. Today a movie is scheduled, but not all off-duty seamen are in the spacious seamen's mess hall. Some are writing letters home, others are squaring off in chess. It is crowded in one of the compartments: Seamen hoping to join the ship's musical ensemble have come for auditions.

Suddently loud bells begin to ring. "Alert. All personnel to your combat posts!" blares the ship's radio in all compartments, cabins and crew's quarters. There is pounding of feet, and the people move swiftly--on the right side toward the bow, and on the left side toward the stern. At this moment each person in the crew is a member of a combat crew, each has his own place in the combat manning table, and each has but a minute to occupy this place. The hatch bolt bars click shut, and the doors of the watertight bulkheads close. The gun turrets rotate. The launcher rails of the surface-to-air missiles rise noiselessly. The depth charge launchers are uncovered. Seamen gunners, loaders, operators and technicians freeze at their places. Terse reports cascade in from the posts, groups and divisions: "Ready for combat!" A command is issued in the engine compartment, and the ship seems to crouch for an instant in anticipation of a leap. The turbines begin to roar powerfully, water churns up at the stem. The "Petropavslovsk," swiftly gaining speed, and leaning to one side, assumes a new course. The outstanding large antisubmarine ship "Petropavslovsk" is on a long cruise. The ship is ready for combat!

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CIVIL DEFENSE

USE OF PROPAGANDA IN CIVIL DEFENSE TRAINING STRESSED

Moscow VOYENNYYE ZNANIYA in Russian No 2 Feb 82 (signed to press 7 Jan 82) pp 12-13

[Article by Major General A. Korzhavin, chief, Propaganda Division, USSR Civil Defense: "A New Level for Propaganda"]

[Text] In the year following the 26th CPSU Congress civil defense propagandists noticeably raised their proficiency under the guidance of party organizations. The effectiveness of their speeches has risen. Raising the scientific level, concreteness and aggressiveness of lectures and discussions and of radio and television broadcasts is viewed by the leading propagandists as what is most important in the reorganization of ideological work discussed at the congress.

In Nikolayevskaya Oblast for example, lectures given by I. Salagor, chief of the rayon civil defense courses (in Voznesensk), enjoy great popularity. He plans his lectures with regard to the domestic and international position of the country, and on the firm foundation offered by the conclusions of Soviet military doctrine. The propagandist does not limit himself to explaining the narrowly specialized, technical problems of civil defense; instead, he deeply reveals the social aspects of civil defense and its humanitarian and whole people's nature.

Those propagandists who avoid sowing the illusion that defense against enemy strikes in the nuclear war would be easy and who persuasively demonstrate the high effectiveness of measures implemented in our country to protect the population from a possible nuclear attack are taking the right approach. By maintaining this approach, they nurture the confidence of their audience in the indestructible power of the Soviet Armed Forces which, as we know, is an indispensable prerequisite of steadfastness in the struggle against the enemy, and tney develop faith in the dependability of the methods and resources of protection from weapons of mass destruction.

In addition to its main mission--protecting the population from such weapons--civil defense concerns itself with keeping national economic facilities operating stably. Naturally, our propagandists must treat this aspect as well. Experience has shown that the training of lecturers in economics has important significance to this task. Thus instructors of civil defense courses in the Latvian SSR thoughtfully and systematically study the fundamentals of economics and the experience of keeping ministries, departments and national economic facilities operating stably.

Good knowledge of the material and of the local situation allows deputy chief of civil defense courses A. Amirnov to give lectures on a high ideological-theoretical level. The concrete tasks of the given collective are examined by him in a close relationship with the tasks of the country's economic and social development, as posed by the 26th CPSU Congress. He makes good use of examples from the experience of the Great Patriotic War. His lectures are often followed by lively discussions on the issues he discusses. Sometimes these issues become the foundation for substantial measures aimed at raising the stability of one national economic facility or another.

The experience of the best propagandists confirms an immutable truth: Propaganda is effective when it is at the required ideological and scientific level, and when it is filled with vital examples from the activity of labor collectives, staffs and services, units and nonmilitary civil defense formations.

But some propagandists divorce their work from the concerns of the day and from civil defense affairs--from the requirements imposed upon civil defense in connection with aggravation of the international situation. The thoughts and premises stated by lecturers are not always supported by deep analysis of practical examples, and universally known facts are repeated over and over again. Problems associated with growth in the role of civil defense in modern warfare and its organic relationship to economic, moral-political, scientific-technical and defense potentials are poorly illuminated. Some such facts were uncovered in Kurganskaya Oblast. We should note that the harm done by such propaganda is discussed quite substantially in Comrade L. I. Brezhnev's "Memoirs": "There is nothing less productive than propaganda without an address, propaganda divorced from the interests of the audience and from the needs of the day. When a speaker avoids responding to controversial questions, he inspires mistrust in people. When a speaker is irresolute at the podium, and repeats universally known truths, there is not an iota of benefit in his words; moreover such a speaker may generally blunt the people's desire to listen to lectures. Formalism is contraindicated in this work; a creative approach is mandatory."

The party's requirements that propaganda must be effective and concrete obligate our propagandists to broadly disseminate the best experience in preparing the public and national economic facilities for protection from mass destruction weapons, and to confidently and clearly describe the selfless actions of the soldiers of various units and warriors in nonmilitary formations as well as Soviet citizens in the course of their implementation of defense measures and rescue of people and public property in times of natural disaster. When propagandists assume this path in their efforts to raise the quality of propaganda, they find themselves facing great possibilities.

Last year's hot summer was rich in events. Hundreds of soldiers and civil defense warriors distinguished themselves fighting forest and peat fires in central regions of the RSFSR, earning a state award--the "For Valor in the Face of Fire" medal. Civil defense staffs, services and nonmilitary formations of Sakhalinskaya Oblast displayed high skill and moral-psychological maturity while aiding in recovery from the aftermath of a typhoon. And in fall the Soviet people worked in organized fashion to quickly correct the serious damage to communication and power lines caused by hurricane winds in Moldavia and in a number of oblasts of the RSFSR and the Ukraine. We must arm ourselves with such examples. This would allow us to noticeably raise the effectiveness of propaganda and make it more comprehensible.

However, not everyone is making broad use of the available possibilities. Speaking at a communist election meeting organized by the party organization of Moscow Oblast's civil defense headquarters, oblast civil defense course chief A. Bondarev self-critically admitted that the courses still do not contain general information on the actions of civil defense forces that fought the forest and peat fires, and that little publicity is afforded to the experience accumulated in this respect. Unfortunately this is not an isolated fact.

The cutting edge of propaganda must also be directed at the slander campaign started in the West in relation to our civil defense. Attempting to frighten the man on the street with an imagined "Soviet military threat," bourgeois propagandists are consciously distorting the humanitarian goals and objectives of our civil defense, again and again trying to prove that its program supposedly threatens to destabilize the strategic ratio of forces. And this is being done at a time when our country is working persistently to prevent nuclear catastrophe and in behalf of disarmament. Explaining the true state of affairs and unmasking the fabrications of bourgeois "Sovietologists" are among the priority tasks of our propagandists, tasks having their origin in the modern international situation.

One important stimulus that can strengthen publicity on the traditions of civil defense is the glorious 50th anniversary of its creation. Active propagandists have already started publicizing this event. Extensive materials on the heroic deeds of local air defense during the Great Patriotic War have been gathered together by civil defense staffs of the Ukraine and of Voronezhskaya and Gor'kovskaya oblasts. Moscow's civil defense headquarters is creating a museum in honor of the 50th anniversary of civil defense. Such a museum has already been opened at the Georgian republic civil defense school. A number of staffs are organizing showings of amateur films and visual agitation. All of this is promoting indoctrination of the Soviet citizens on the basis of heroic examples, and in the spirit of high responsibility for implementing protective measures.

The success of civil defense propaganda depends in many ways on business-like, creative ties of civil defense staffs with the mass media and with public organizations. Such contacts make propaganda at a higher level possible, and they raise its effectiveness. In Voronezhskaya Oblast for example, cultural institutions, trade union, Komsomol, DOSAAF and Red Cross committees, the civil defense section of the "Znaniye" society and the mass media participate in civil defense propaganda. A two-day seminar attended by lecturers of the "Znaniye" society and by civil defense and DOSAAF propagandists, who gave lectures and reports on military-patriotic topics, was conducted here under the sponsorship of the party obkom. A permanent seminar-lecture course has been created at the garrison Officers' Club through the joint efforts of the oblast organization of the "Znaniye" society, the Komsomol, DOSAAF and Red Cross obkom's and the oblast civil defense staff. A. Sklyarova, former commander of a bomb disposal squad and a veteran of local air defense, spoke to the young people in one of the lessons. Her squad, which consisted of 13 Komsomol girls, disarmed about 500 bombs, a large number of mines and other explosive objects. Her presentation was concluded with the films "Battles in the Voronezh Sector" and "Psychological Seasoning." Oblast television carried a report on this lesson.

Communists of the oblast staff and civil defense courses conduct lessons in schools for active Komsomol members and help young people to implement the Komsomol Central Committee decree "On Participation of Komsomol Organizations in Civil Defense Measures." Oblast deputy chief of staff for propaganda N. Mogilanskiy is a true mentor of young people in this important matter. With his help, civil defense propaganda sections have been created in youth lecture groups.

Civil defense propaganda has become noticeably more active at national economic facilities during integrated exercises. It was deep in content and diverse in form at the "Rossiya" Kolkhoz, Ostrogozhskiy Rayon, Voronezhskaya Oblast. The 26th CPSU Congress delegate Ye. Dolzhikova appeared before the kolkhoz farmers and students of the local school. Participants of a youth defense-labor assault force told the animal farmers about the battles for Ostrogozh lands during the Great Patriotic War and about the need for strengthening our country's defense capabilities today, and they acquainted them with the resources and means of protection against modern weapons.

On the other hand civil defense staff executives of Ryazanskaya Oblast cannot brag about business-like ties with public organizations and the mass media. As a result materials on civil defense subjects rarely appear in not only the oblast newspaper PRIOKSKAYA PRAVDA but also in the rayon and plant newspapers. Until very recently there had been no civil defense sections and lecture groups under "Znaniye" society organizations in the oblast. And it is no accident that the level of many civil defense propaganda functions and their effectiveness are low in this oblast.

In February the country is celebrating its traditional public defense month dedicated to the 64th anniversary of the Soviet Army and Navy. During the month many civil defense staffs have been providing active propaganda on civil defense. The civil defense headquarters of Tambovskaya Oblast is organizing civil defense days. Active members of the "Znaniye" society and of DOSAAF and civil defense staff workers are giving lectures and reports in labor collectives and in residential complexes. Exhibitions of literature and visual aids are being organized and motion pictures are being shown in clubs and libraries. The month's functions are being broadly publicized in the press and on radio and television. Experience shows that active participation of civil defense staffs and courses in the public defense month is one of the ways of raising the ideological level and effectiveness of civil defense propaganda.

Propaganda plays a substantial role in preparing national economic facilities and the public for protection from weapons of mass destruction. Spreading civil defense knowledge among the broad masses, propagandists help Soviet people arrive at a correct understanding of the role and place of civil defense in modern warfare, and nurture an active attitude toward civil defense measures. To devote one's entire experience and strength of spirit to this noble work means to be a champion of the Leninist party's ideals of protecting the socialist fatherland.

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TRAINING IN RURAL AREAS OF RSFSR

Moscow VOYENNYYE ZNANIYA in Russian No 2, Feb 82 (signed to press 7 Jan 82) p 14

[Article by Colonel A. Rudenko, chief, combat training division, deputy chief of staff, RSFSR Civil Defense: "Integrated Exercises in the Countryside"]

[Text] In recent years many rural soviets of the Russian Federation underwent integrated exercises simultaneously with all facilities located on their territory. The time has come to analyze the experience and make the conclusions.

Clearly the preparations for and the conduct of such exercises are elicited by life itself. After all, no facility located on the territory of a village or settlement soviet can successfully implement the entire complex of civil defense measures without the appropriate decisions of the executive committee and without the help of deputies and active civil defense workers. We must unite the efforts of all facilities in behalf of complete and deep exercise of the organizational and administrative functions of civil defense and in behalf of keeping agricultural production stable, and we must create conditions making it possible for people to practice working in a complex, fast-changing, realistic situation, to maneuver men and equipment extensively and to organize coordination among formations. By doing so, in a word, we create the possibility for completing all tasks that are beyond the means of any one facility taken alone.

From the very beginning, local organs had to solve a large number of organizational problems. First of all they had to determine what the civil defense plan of the village soviet should be, and what should be the content of its documents and the composition of the control organ. These problems were solved by studying the experience of dozens of demonstration exercises that had been conducted on the territory of the village soviets.

Looking at a civil defense headquarters as a control organ of the village soviet civil defense chief, we would see that its composition is something like this: chief of staff (usually the secretary of the executive committee), his deputy for planning and civil defense formation accounting (a worker of the executive committee), deputies for protection of the public, animals and agricultural products, for information and communication, for maintenance of public order and for firefighting (people's deputies, specialists). Wherever the appropriate base is present (a medical center, trade and food services enterprises), the control center may be staffed by executives of these institutions, who carry the authority of the chiefs of the appropriate services. Thus in each concrete case the composition of the civil defense staff is determined by territorial, economic, social and other features. But in general the headquarters is a control organ of the village soviet civil defense chief, the orders of whom are binding upon all facilities, organizations and institutions located within his territory. Of course every exercise does introduce something new, something requiring creative thinking and adjustment of the plans.

When preparations were underway for the first integrated exercises on the territory of village soviets, the question as to who should lead them arose. Thus at first rayon workers were appointed the leaders of exercises (especially demonstration exercises) in some oblasts, and the appropriate administrative staffs were manned. But as experience was accumulated and as more people underwent training in civil defense courses, this role began to be assumed more and more often by the chairmen of the executive committees--the village soviet civil defense chiefs, and the civil defense chiefs of the principal facilities began to be appointed deputy exercise leaders as a rule.

Experience also demonstrated that exercise leaders need the help of assistants responsible for engineering-technical affairs, for reception of the evacuated public, for logistical support, for simulation and for other functions. Umpires are sent to population centers, formations and services, and if necessary to production sections as well. The administrative staff is created on the basis of the village soviet staff, and it is reinforced by specialists from the principal facility on the territory, by active civil defense workers and by workers from other enterprises. The civil defense chiefs of other facilities participating in the exercise perform the role of the assistants of the exercise leaders.

Preparations for integrated exercises in village soviets usually begin 3-4 months beforehand, following the receipt of organizational instructions from rayon civil defense chiefs. The village soviet executive committees make special decisions on this question while simultaneously confirming their calendar plans for preparations and for the exercise itself.

Then the exercise leader performs reconnaissance together with his staff, his deputies and his assistants, and he gives the order to begin writing the plan. Incidentally there were many disputes as to how deeply the exercise plan had to be written in relation to the village soviet and large and small facilities. I believe that we have finally reached the correct decision: The exercise plan must be written in its entirety, as foreseen by the manual, for the village soviet and the large facilities (kolkhozes, sovkhozes, industrial enterprises). Meanwhile the civil defense chiefs of the small facilities (stores, post offices, medical centers and so on) should draw up particular plans, functioning as assistants to the exercise leaders. On occasion exercise staffs have supplied excerpts from the exercise plan to these facilities.

In many village soviets the integrated exercise plans were drawn up as timetables. In particular the timetable plan recommended in the journal VOYENNYYE ZNANIYA (No 2, 1977) was found to be well suited for these purposes. Village soviet chairmen, who adapted it to local conditions, believe that is is more convenient to exercise management than is a textual plan.

It would be important to note that with the help of civil defense staffs and courses, we have managed to significantly improve the teaching skills of village soviet chairmen functioning as exercise leaders. They now independently conduct staff training sessions and command-and-staff exercises in the preparatory period, and they play out the actions of the integrated exercise plans together with their deputies, assistants and umpires, laying their emphasis on practical exercise, as a result of which many useful things were done in behalf of civil defense. Thus civil defense workers on the territory of the Krivodanovskiy village soviet, Novosibirskaya Oblast outfitted several facility civil defense control posts, adapted vegetable storehouses, basements and cellars as radiation shelters, made many fabric dust masks and cotton gauze dressings, set up radio centers and additional broadcasting resources throughout, implemented fire prevention measures and sealed off water sources and residential and production buildings. The economic impact of all of these jobs is estimated at tens of thousands of rubles.

The experience of the Krasnolukskiy village soviet, Gor'kovskaya Oblast deserves attention. The actions to be taken by firefighters and equipment were practiced in coordination with other civil defense formations in a complex fire situation. Following the coordination plan, during rescue and emergency reconstruction operations the Kolkhoz imeni V. I. Lenin, for example, furnished the poultry factory with a mobile electric power plant and a water dispensing unit, while the poultry factory sents its formations to the kolkhoz to provide assistance to it.

It is important to study the entire complex of problems reflected in civil defense plans in the course of exercises. We know that according to these plans, people evacuated from the cities come to the territory of the village soviets. This means that the problems associated with receiving, locating and providing for evacuees must be worked out in coordination with the urban facilities. How would this be done best? First of all we could plan and conduct simultaneous integrated exercises for a village soviet and the urban facility from which people are to arrive in the village. The second approach would be to have the chairmen of the evacuation commissions of urban facilities participate in the integrated exercises of the village soviets so that they could finalize and verify their own plans. And it would be still better to test the feasibility of their plans by bringing in a group of evacuees from the city to provide practice in handling the associated problems. This is what is done in Tul'skaya Oblast.

The success of an exercise is known to depend to a great extent on the level and effectiveness of political work. Local party organs organize this work on the basis of the experience of many rayons. Thus for example, the plan for political work during the exercise conducted by the Krasnokrymskiy village soviet (Rostovskaya Oblast) was written on instructions from the raykom by the secretary of the principal facility's party committee, who coordinated his efforts with those of communists representing other party organizations. The plan was approved by the secretary of the party raykom. In other cases CPSU raykom's asked the secretaries of the party organizations of all facilities participating in an exercise to plan the political work. Their efforts were coordinated by raykom representatives.

As we can see, the experience of integrated exercises teaches us many things. It should be attentively studied, and it should be used productively to raise the effectiveness and quality of training.

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TRAINING IN ELEMENTARY SCHOOLS DISCUSSED

Moscow VOYENNYYE ZNANIYA in Russian No 2, Feb 82 (signed to press 7 Jan 82) p 15

[Article by I. Bukov, teaching methods expert, Central Institute for Advanced Training of Teachers, RSFSR Ministry of Education: "When the Foundation is Sound"]

[Text] The lesson began with a formation. The fifth-graders quickly fell into formation and fitted their gas masks. Class leader G. Bannikova attentively inspected the children, made her remarks and asked them to take their places.

"The subject of our lesson," Galina Ivanovna declared, "is the rules of behavior and actions taken by the public in response to the threat of an enemy attack and in response to an air raid signal. We will study the order of the signals and practice the things we must do in response. But first let us review the material we studied earlier."

When she asked the children who would like to name and show the personal protective resources, they all volunteered, such that the teacher had to make the choice. The students answered the questions confidently and precisely. They described the structure of a gas mask, the simplest protective resources and the rules of using them, and they displayed their ability to use protective resources and make cotton gauze dressings. Whenever someone gave a wrong reply, immediately a "forest" of hands shot up--there were so many wishing to correct or add to what a comrade had said.

The second part of the lesson--presentation of new material--was just as lively and interesting. The teacher gave examples from the Great Patriotic War, and she described how boldly and decisively local air defense warriors acted. She recalled to the children that they had already covered the air raid and all clear signals in lessons during their second year and in training exercises in the third and fourth grades.

"Now let us listen how these signals sound over the radio broadcasting network," the teacher said as she turned on a tape recorder.

To reinforce their knowledge she asked the students what they should do if they heard the signal at home, on the street and in the city library.

"And now we will all show that we know how to respond to an air raid signal."

Once again she turned on the tape recorder, and the class quickly left for the shelter. There, Galina Ivanovna conducted another training exercise in the use of the gas mask, and she reinforced the previous material. The class took a very active part in the lesson, and it was highly beneficial to the children.

Good organization of lessons in fifth grade and the students' firm and confident knowledge of the material are persuasive evidence of the fact that serious attention is devoted to civil defense in Secondary School No 17 in the city of Lipetsk. What we might call a model training material base has been created here. The classroom contains showcases filled with instruments and protective resources, and diplomas and certificates earned by the school are displayed on a separate stand. The senior students worked hard to set it up. The school enjoys all of the conditions for conducting lessons in collective protective resources.

The administration, the teacher collective and the school director himself, N. Yeremeyev, devote a great amount of attention to civil defense. Problems associated with raising the quality of civil defense training for schoolchildren are discussed by the pedagogical council. The class leaders of the fifth grade and the teachers of the second grade regularly study in civil defense courses.

Military instructor A. Anoshko provides a great amount of help to the teachers. He always finds the time to answer their questions and to suggest the best ways to conduct a lesson. He himself often attends the lessons, analyzes them in detail and holds demonstration lessons.

The principle of continuity and successiveness of civil defense training, which has such great practical significance, is strictly adhered to in Lipetsk Secondary School No 17. Neither the third nor the fourth grade is ever excused from the training process, such that by the fifth grade the children have a solid reserve of knowledge and skill. Extracurricular training is conducted regularly under the guidance of teachers and with the direct assistance of the military instructor.

An entirely different picture is observed wherever adequate attention is not devoted to training for students in second through fourth grades. Once I attended a lesson for fifth graders in such a schoool. The lesson was conducted by a military instructor simultaneously for two classes. The class leaders attended as incidental observers. It was crowded in the office, it was noisy, the children did not pay attention, and many of them handled their gas masks carelessly. Frankly speaking, there was little benefit from such a lesson. I found out later that in anticipation of an inspection the school administration and class leaders had to hurry up and make up for lost time, which is why they combined two classes.

The inadequate responsibility with which some class leaders approach civil defense lessons is at times the cause of gross mistakes by senior students attempting to put on gas masks and perform other practical procedures. This is something they should have learned how to do much earlier. Practice shows that good quality civil defense lessons and training for second through fifth grades is the foundation of the sound knowledge and skills of upperclassmen.

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LECTURE ON SHELTERS GIVEN

Moscow VOYENNYYE ZNANIYA in Russian No 2, Feb 82 (signed to press 7 Jan 82) pp 17-18

[Article by Military Instructor L. Kashnikov: "Subject 4: Shelters"]

[Text] Three practical lessons of 1 hour each are allotted to the study of the subject "Collective Protective Resources" in the basic military training program. During this time the student must learn that taking cover in protective structures is the most important means of the public's protection from mass destruction weapons, he should come to understand how shelters are set up, and he should learn how to use them. In particular he must know how to close and open protective airtight doors and emergency exit hatches, turn the filtered ventilation unit on and off, and work with its manual drive. Students must also assimilate the techniques of laying out the simplest protective structures--slit trenches.

It would be desirable to hold the lessons in the protective structure within which students would take shelter in a real situation, or at least in the shelter assigned to the school. Posters, mock-ups, diagrams, shelter building tools and gas masks (respirators) would be needed as well.

It would be suitable to begin the first lesson by recalling that taking cover in protective structures is a means of gaining protection, giving a brief classification of shelters, and turning the attention of the students to the fact that they are erected in anticipation as a rule, in peacetime.

After this the instructor can go on to a discussion of shelters specifically, giving their definition and describing their protective properties and internal equipment. Students should be shown the compartments to be used by people, the airtight vestibule, the filtered ventilation unit, the toilets, the protected entrances and the emergency exit. During this demonstration the military instructor should explain the way water, heat, light and communication are supplied in a shelter.

Discussing the order of entering a shelter, he should demonstrate the techniques of opening and closing the protective airtight doors. On his instructions a few of the students should repeat these techniques, taking turns doing so. Following the same principle of combining narration and demonstration, the military instructor should acquaint the students with the rules of using the emergency exit. Students who had participated in such a demonstration and mastered the practical techniques could be appointed to the shelter maintenance staff, which the military instructor creates for training purposes. This staff will be required in the second lesson on this subject.

Going on to the next problem the military instructor emphasizes that in the event the enemy uses a nuclear weapon, not only conventional shelters but also fallout shelters would be used. Underground and surface structures (building cellars, house basements, vegetable storehouses), mines, and rooms in residential and production buildings can be adapted as fallout shelters. Thus for example, while an unadapted basement in a wooden house can reduce radioactive radiation by 7-12 times and one in a stone house can reduce it by 200-300 times, folllowing adaptation, such basements can reduce radiation by 100 and by 800-1,000 times respectively. Protective properties can be improved by heaping an additional layer of dirt over the shelter, by applying dirt fill to the walls of a building, by sealing off cracks and entrances, by plugging unneeded openings and so on.

It would be suitable to use concrete examples to explain to the students which room in the school building might be useable as a fallout shelter and how it should be adapted. If this had already been done previously, the students could be acquainted with the layout and with a simplified ventilation system right within such a shelter. Moreover the military instructor may use mock-ups, posters, film strips and slides while presenting the material.

One of the important training problems is the rules of behavior in protective structures. The military instructor must explain that shelters are filled in response to civil defense warning signals, and that the order of entry and the routes to shelters are determined beforehand. Considering the limited amount of time available to take shelter, everyone must display organization and discipline, and not yield to panic. Order is maintained in a protective structure by the shelter maintenance staff, the instructions of which are binding upon all persons occupying the shelter.

Students attending this lesson must firmly learn what they should take with them into the shelter (gas mask or respirator, a two-day reserve of food in protective packaging, water, toiletry articles, personal necessities and documents), how to behave themselves in a protective structure, what restrictions there are (no smoking, no loud talking, no flames and so on) and why these restrictions are imposed. Exit from a shelter is permitted only on command of the maintenance staff or the commandant following the receipt of the appropriate instructions (a signal), or in the case of a mishap that threatens the lives of persons occupying the shelter. If the main entrance cannot be used the shelter can be abandoned through the emergency or back-up exit.

It would be suitable to explain and demonstrate to the students how they can open jammed doors and clear obstructions in emergency situations (a set of tools should be available in the shelter for this purpose). However, these problems may be discussed in the second lesson, at the time when students occupy the shelter in response to an air raid signal.

It should be noted additionally that a military instructor preparing for the first lesson of Subject 4 should account for local conditions and possibilities, and highlight the training material appropriately as he presents it. Thus if it is a rural school the students must learn the layout of shelters and the rules of behavior in shelters to the extent that may be required for performance of their functions in rural nonmilitary formations engaged in the rescue of people from damaged and obstructed shelters. For the most part, however, their attention should be turned to fallout shelters. In both rural and urban schools, the instructor would best rely on the experience of using protective structures in the Great Patriotic War.

In the second lesson, by asking questions the military instructor should determine how well the students assimilated the material, generalize their responses and once again recall to them the order of entering protective structures and the rules of behavior within them. Then he should signal to the shelter maintenance staff to be ready to receive shelter occupants.

In response to an air raid signal (a siren or a tape recording is used) the students leave their place of study and head for the shelter in organized fashion. The military instructor monitors their actions, walks to the shelter and gives the command: "Seal off protective structures." The shelter staff responds.

After evaluating the actions of the students and explaining the mistakes they made, the military instructor gives the all clear signal. The maintenance staff opens up the protective airtight doors. Students abandon the shelter and return to where they had first assembled. Then the air raid signal is given once again. The students reenter the shelter, and the shelter staff tends to its responsibilities, trying to avoid mistakes.

The military instructor provides the following scenario input: "The enemy has made a nuclear strike, as a result of which the main entrance to the shelter is obstructed. The filtered ventilation unit has broken down. Further presence in the protective structure threatens the lives of the shelter occupants. The radiation level outside permits exit from the shelter. I order you to leave it through the emergency exit."

The maintenance staff dons personal protective resources (gas masks for training purposes) and opens up the curtains in front of the emergency exit. In response to a command from the military instructor the rest of the students, also wearing gas masks or respirators, follow one of the maintenance staff members out of the shelter through the emergency exit and convene at a prearranged place (the classroom, an office). Here they remove their gas masks and respirators, and the military instructor scores their actions.

While this short critique goes on, the maintenance staff closes the curtain on the emergency exit, opens up the main entrance and prepares the protective structure for performance of standards No 6 (filling the shelter) and No 9 (taking cover in a shelter in response to an air raid signal). Experience has shown that students can fulfill these standards twice in 15-17 minutes. All that is left after this is to analyze and evaluate the actions of the students.

During this lesson the military instructor must frequently come to the assistance of the class members he had appointed to the shelter maintenance staff, and whom he had briefed beforehand.

The third lesson requires special preparation. Student helpers and the tools necessary for laying a slit trench must be prepared. The helpers take along string to lay out the slit trench, a medium-sized hatchet or hammer, a tape measure 5-10 meters long, chalk and wooden pegs--10 per trench (in the event that the trenches would have to be laid out on soft dirt). The remaining students should carry spades.

Before the lesson starts the class members should be formed up in an area near the site of the future trenches. The military instructor announces the subject and objective of the lesson and describes the problems to be worked out.

He briefly explains that in real wartime conditions it may become necessary to quickly build slit trenches, the simplest sort of shelters, and he describes their function. He acquaints the students with the order of building them, the required materials and the amount of time allowed.

First of all the military instructor defines what he means by laying out a trench, and he shows how the trench site is selected. He is assisted by his helpers. They pound pegs into the dirt along the perimeter of the trench and stretch the layout string over them. The edges of the trench are dug out with the spades along the string line. Later on this trench serves as the model. While the trench is being laid out the military instructor describes the protective properties of open and closed slit trenches.

Then he divides the students into squads of 10 each and asks each group to lay out a trench on its own. To enhance visuality a display bearing pictures of slit trenches may be set up at the layout site.

If the school grounds are paved (with asphalt), the layout operation is restricted to drawing chalk lines along the layout string. Wherever possible, the slit trench should be dug to its full depth. It could subsequently be covered over and used for training purposes. It would be useful for the students to see for themselves how a slit trench is covered over with various available materials, how it is waterproofed, and how it is covered over with dirt. And they should not only see, but they should also try it themselves. Such training is remembered for a long time.

Recommended literature: "Grazhdanskaya oborona" [Civil Defense], a general training aid edited by A. T. Altunin, Moscow, Voyenizdat, 1980; Yegorov, P. T. et al., "Grazhdanskaya oborona" [Civil Defense], Moscow, Vysshaya shkola, 1977; Kammerer, Yu. Ya., and Kharkevich, A. Ye., "Ekspluatatsiya ubezhishch grazhdanskoy oborony" [Using Civil Defense Shelters], Moscow, Stroyizdat, 1970; Chugasov, A. A., "Prosteyshiye sredstva zashchity" [The Simplest Protective Resources], Moscow, Voyenizdat, 1980; Ostroukh, F. I., "Stroitel'stvo bystrovozvodimykh ubezhishch i protivoradiatsionnykh ukrytiy" [Construction of Quickly Erected Conventional and Fallout Shelters], Moscow, Voyenizdat, 1972; "Plakaty po grazhdanskoy oborone. 9 klass." [Civil Defense Posters. Ninth Grade], Moscow, Voyenizdat, 1980.

> From the editor: This journal usually offers one particular lesson variant in the articles on teaching methods it carries. In practice, however, other variants are possible. In particular, the first and second lessons of subject 4 are paired together into a single lesson in many schools.

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CIVIL DEFENSE

LECTURE ON FIREFIGHTING RECONNAISSANCE

Moscow VOYENNYYE ZNANIYA in Russian No 2, Feb 82 (signed to press 7 Jan 82) pp 18-19, inside rear cover

[Article by Yu. Valentinov: "Fire Reconnaissance"]

[Text] The program for civil defense firefighting formations foresees the subject "Reconnaissance of Fires and the Methods of Extinguishing Them." This subject requires 2 hours of practical lessons, first with commanders and then with the rank-and-file of fire reconnaissance groups. The lesson with the commanders is usually led by the chief of the facility's civil defense firefighting service, and the group commanders themselves conduct the lessons for the rank-and-file. This is why it is important during the first lesson for the leader to turn attention to training methods as well as to the basic subject matter of the lesson. This will help the commanders to prepare themselves and to conduct the same sort of lessons with their subordinates better.

In this article we will discuss how best to begin preparation for the lesson and how to conduct it with the greatest payoff.

The leader clearly determines the problems that require practical study and correspondingly the requirements of the lesson area early, while drawing up the lesson plan. The lesson should be conducted, as recommended in the program, at a training ground in a specially equipped area, or on the territory of the facility itself, where fires and other elements of the situation can be simulated.

The time is apportioned in such a way that most of it is taken up by the practical activities of the scouts and so that not more than 15-20 minutes would be devoted to explanations. It would be desirable for the students to read the necessary literature on this problem before the lesson (in particular, see "Posobiye po protivopozharnoy sluzhbe grazhdanskoy oborony" [Training Manual on the Civil Defense Firefighting Service], Stroyizdat, 1981, p 81) and view the appropriate film strips and movies.

It would also be useful to acquaint them beforehand with the structural features of the relevant buildings, structures and units and with the production processes--especially with those offering the greatest fire hazard in the case of damage or mishap. All of this information could first be discussed with the help of models, and then on the eve of the lesson the specialists could be shown the actual shops, laboratories, structures and units.

A fire truck is allocated to the reconnaissance group. Squads are given radiation and chemical detection instruments, personal protective resources, portable radio sets for communication with the group commander, flashlights and other gear.

Explaining the content of the subject and the training objective of the lesson, the leader emphasizes that fire reconnaissance is an important form of firefighting support to rescue and emergency reconstruction operations. It is organized by the facility civil defense chief in compliance with the general reconnaissance plan.

A complex fire situation may arise at the center of a nuclear strike (see diagram below). What missions must the scouts perform?

This part of the lesson may be organized as a question-and-answer session. For example the leader can ask a squad commander:

"Comrade Petrov, assume that the forces of the firefighting service are at the approaches to the facility and that they will be the first to fight the flames, paving the way for other formations called in for rescue and emergency reconstruction operations. What should reconnaissance establish first?"

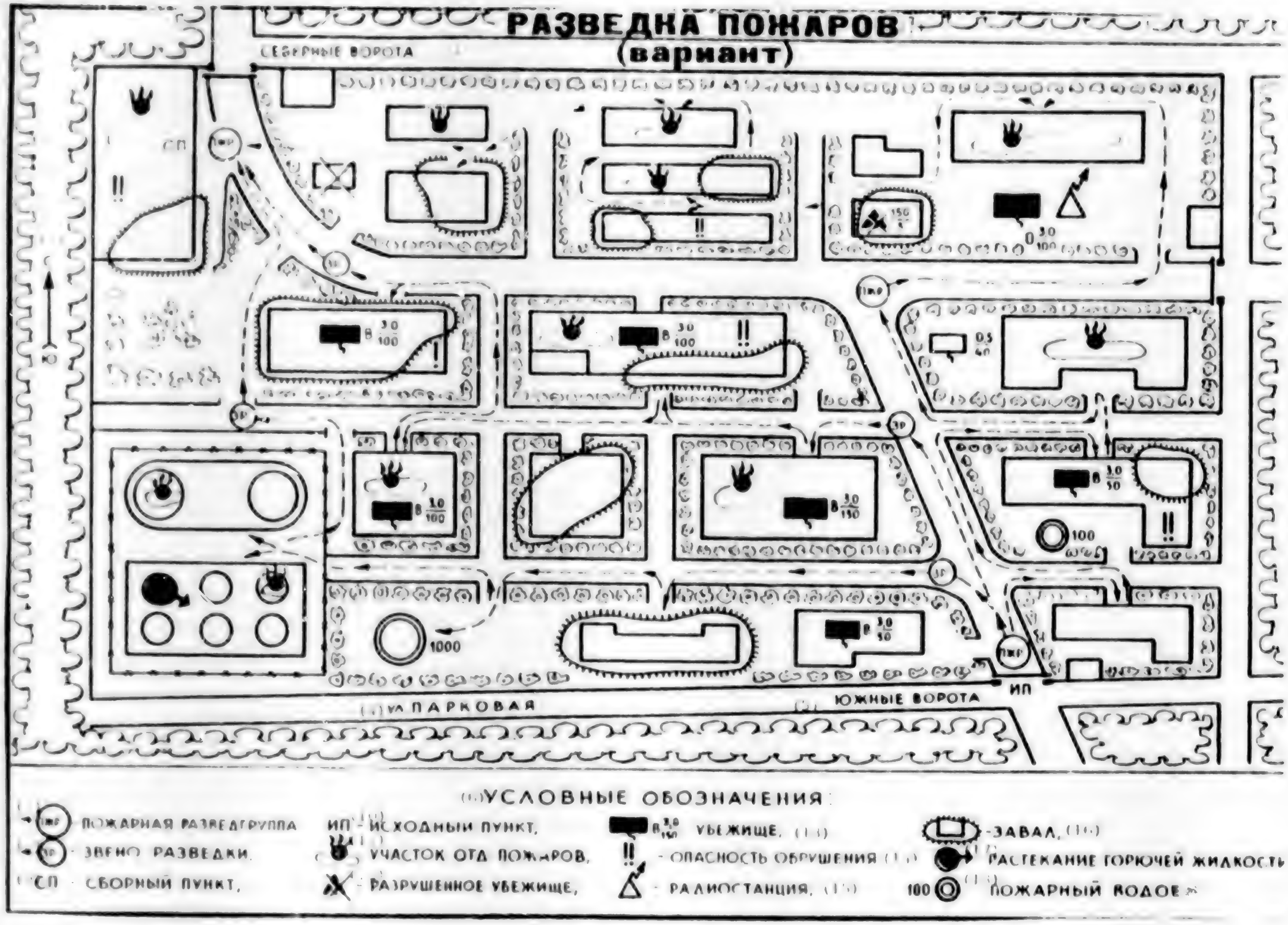
One possible answer is:

"Determine the status of approach roads to buildings, structures and production units engulfed in flames, determine the shortest routes to them and make note of back-up routes in the event that the main roads are obstructed; ascertain the availability of water sources and resources with which to supply water for firefighting (water basins, artesian wells, spray ponds, hydrants and so on) and the possibilities of using them to extinguish fires and of replenishing them with water."

The other groups of problems are examined in the same order and sequence. Special attention is turned to whether or not there are people in the fire zones and to exactly where they are (in a shelter, on particular stories of a building, trapped in ruins and so on). One of the important missions is to establish the possibility of explosions at the locations of production equipment, and presence of potent toxic and poisonous substances.

The faster these and other data are obtained, the leader should emphasize, the more efficiently the facility civil defense chief could make his decisions and enact the necessary safety measures in the places of work.

Then the class can go on to practical actions. The lesson leader (now he plays the role of reconnaissance group commander) gives concrete missions to the squads, indicating the starting point, the place where he will be, and the assembly point following the end of reconnaissance (see diagram). In this most important, decisive



[Key on following page]

Key:

1. Fire reconnaissance (a variant)
2. North gate
3. North
4. Park Street
5. South gate
6. Symbols
7. Fire reconnaissance group
8. Reconnaissance squad
9. Assembly point
10. Starting point
11. Fire area
12. Destroyed shelter
13. Shelter
14. Danger of collapse
15. Radio station
16. Ruins
17. Fuel spill
18. Fire reservoir

stage of the practical lesson, it is important to make sure that every student learns how to use external clues to determine the nature and size of a fire, smoke-filled zones and the direction of smoke drift.

To make the conditions more complex the leader can provide scenario inputs on the radiation and chemical situation, so that the students could promptly and competently use their personal protective resources and get training in work with radiation and chemical detection instruments.

As a rule reconnaissance is led personally by the reconnaissance group commander. The latter locates himself beside the fire truck's radio set and operates from within the main sector, sending reconnaissance squads to other sectors. Here as well it is important to work out the details of communication with these squads and the order of reporting obtained data quickly and precisely. I mentioned at the beginning of the article that squad commanders would best be furnished with portable radio sets. They can use them to transmit all necessary information directly from the locations in question. Quickly evaluating this information, the group commander can report to the facility civil defense chief of staff via his own communication channel on the spot.

Some lesson leaders use reporting cards bearing diagrams of the objects of reconnaissance in order to ensure the fullest possible and most accurate generalization of the data. Students use symbols to describe the situation on these cards. (For example a student may use symbols to indicate presence of a fire in the vicinity of Shop No 1 and that there are a certain number of people who had taken cover in a nearby shelter). These data are transmitted simultaneously to the group commander by radio. Following reconnaissance, the group commander collects these cards together in order to write a general report.

Summarizing the lesson results in a brief critique, the leader makes note of the students who had performed the best, he dwells on the shortcomings, and he indicates how they may be corrected.

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CIVIL DEFENSE

TRAINING REQUIREMENTS FOR CHILDREN OUTLINED

Moscow VOYENNYYE ZNANIYA in Russian No 4, Apr 81 (signed to press 9 Mar 81) p 12

[Article by Colonel S. Bystritskiy: "Basic Requirements"]

[Text] The "Civil Defense" section of the All-Union Physical Culture Complex of GTO [Ready for Labor and the Defense of the USSR] is an important component. In accordance with the recommendations confirmed by the Committee for Physical Culture and Sports attached to the USSR Council of Ministers in May, 1974, every future GTO badge holder must answer correctly two or three questions on the facilities and methods of protection from weapons of mass destruction, stay a fixed time in a gas mask with a physical load and accomplish two practical requirements. The right of selecting the requirements from those 20 enumerated in the recommendations is granted to commissions for the GTO Complex being created in enterprises, schools, organizations and so forth.

What are the basic requirements of the GTO Complex for the "Civil Defense" section for each step?

Boys and girls 10-11 years old (step 1) must master the second class program and know the rules of using the gas mask (respirator) for conduct in the shelter (covering). It is necessary for them to stay 30 minutes in a gas mask with a physical load and accomplish two practical requirements (numbers 1 and 9) by using the facilities of individual and collective protection.

Boys and girls 12-13 years old (step 1) and teenagers 14-15 years old (step 2) must master the fifth class program (know the tasks of civil defense, the destructive effects of nuclear and chemical weapons and methods of protection from them, the rules of using facilities for individual and collective protection, the rules of conduct according to the GO [Civil Defense] notification alarms, and procedures for rendering self aid and mutual aid), stay 30 minutes in a gas mask with a physical load and accomplish one of the requirements by using the facilities of individual and collective defense (numbers 1, 2, 5 or 9) and one by rendering self or mutual aid (numbers 16-18).

For those passing the performance standards for the GTO bade steps 3, 4 and 5 (youth and girls 16-18 years old, men 19-60 years old, and women 19-55 years old) it is necessary to master completely the program of the population's universal compulsory minimum of knowledge for protection from weapons of mass destruction; for students and school-children--the program for civil defense of the respective schools, to know the rules of using the facilities for individual and collective protection, the rules of conduct and action of the population under the threat of an enemy attack, the rules of conduct according to the Civil Defense alarms, procedures for rendering self aid and mutual aid, methods of conducting rescue and urgent emergency-recovery operations, to know how to make a cotton-gauze bandage, and to adapt daily clothing and footwear for protection of the skin. Youth and girls 16-18 years old, men up to 40 and women up to 35 years old must stay one hour in a gas mask (30 minutes for persons of old age) with a physical load and accomplish two practical requirements. It is noted that serial numbers are maintained in the GTO Complex of the standards of the population's universal compulsory minimum of knowledge for protection from weapons of mass destruction.

Training for carrying out the requirements of the GTO Complex for civil defense, as a rule, coincides with the population's instruction for the 20-hour program or with conducting Civil Defense exercises in the   Practical exercises and training are organized during extracurricular time for junior courses in VUZ's and technical schools.

The check of theoretical knowledge and execution of such a requirement of the complex as staying in a gas mask for a period of time are conducted prior to receiving the standard. Those who show unsatisfactory knowledge at this time are not allowed to pass the practical standards.

It is recommended that standards of the nature of competitive athletics be accepted at contests in a festive setting. Qualified judging should be taken care of beforehand.

Examination results and execution of standards are entered on lists or examination cards envisaged by the regulation governing the GTO Complex. The right of recording is granted to members of commissions for the GTO Complex, contest judges; and in schools to Civil Defense teachers and military instructors.

Civil Defense chiefs of national economy objectives bear responsibility for organizing the training of GTO badge holders for the "Civil Defense" section. Headquarters of the objectives participate in the work of the commissions for the GOT Complex; organize exercises, training and receiving the examinations (standards); provide all these actions through the necessary training property; organize the training of exercise leaders and judges; control their work; and do bookkeeping. During this time they maintain close contact with the committees for physical culture and sports, with Komsomol and DOSAAF committees, and with trade union organizations. The duty is entrusted to Civil Defense headquarters and courses of all degrees to render systematic assistance to sport committees, and to control the pace of carrying out civil defense requirements for passing the performance standards of the GOT Complex.

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CIVIL DEFENSE

ROLE OF ISPOLKOM IN CIVIL DEFENSE TRAINING

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) pp 16-17

[Article by Colonel S. Maykov, deputy chief, Propaganda Division, USSR Civil Defense: "The Daily Concern of the Ispolkom"]

[Text] As was emphasized at the 25th CPSU Congress, in recent years soviet organs have been making an increasing contribution to ensuring integration of economic and social development. "The soviets are coordinating and monitoring the work of enterprises and organizations on their territory more and more actively," noted Comrade L. I. Breznnev in his accountability report. "And the CPSU Central Committee is doing everything to support precisely this direction in the activity of the local soviets."

A decree recently adopted by the CPSU Central Committee, Presidium of the USSR Supreme Soviet and the USSR Council of Ministers, "On Increasing the Role of the Soviets of People's Deputies in Economic Development," is also helping to expand the control and coordination functions of the soviets.

The implemented measures are making it possible for local soviets to optimally combine the interests of territorial and sector organs with the purpose of improving civil defense. After all the soviets and their local ispolkoms are precisely the ones responsible for its direct management, via their staffs and services.

The success and quality with which civil defense tests are completed depend in many ways on how clearly and closely the joint work of ispolkom divisions and administrations and the civil defense staff is coordinated. Their effective contact makes it possible to include executives and many specialists in public defense functions and to expand the influence of civil defense organs on associations, enterprises and organizations subordinated to the ispolkom.

This approach is especially important and necessary in rural areas, where a small collective of workers cannot do without the active help of all organs of an executive committee.

Instructive in this aspect is the experience of rural Vetkovskiy Rayon, Gomel'skaya Oblast. Here, work on national economic tasks is regularly coordinated with improvement of civil defense. For a number of years the rayon as a whole has been successfully preparing to protect the population from mass destruction weapons.

All exercises and other measures are implemented in organized fashion, and a good training ground has been created. An STsV [not further identified] post has been installed to permit notification of the executive staff, and a dispatch communication system linking all of the rayon's farms has been set up.

The successes are to a significant extent the result of the constant attention devoted to civil defense measures by the party raykom (L. Novoselov, first secretary) and the rayon ispolkom (chairman, Ye. Ryzkhovskiy). Solving national economic, social and educational problems in integration under the guidance of the party raykom, the rayon ispolkom efficiently reacts to all issues associated with practical implementation of civil defense measures, it sees that the state, farm and social organizations make an active effort in this regard, and it organizes educational work among the public.

The party raykom and the rayon ispolkom adopt joint decrees on the basis of inspections and a detailed acquaintance with the state of affairs at national economic facilities. These decrees provide a thorough analysis of the results and the shortcomings, and they impose concrete requirements on party organizations, on the ispolkoms of village and settlement soviets, and on the executives of enterprises, institutions, schools, kolkhozes, sovkhozes and social organizations in regard to strengthening civil defense.

A party meeting called by the rayon ispolkom's primary party organization on recommendation of the rayon committee of the Communist Party bureau also helped to activate the civil defense efforts of the deputies. Communists discussed the question of raising their responsibility for civil defense tasks. The main report, the speeches and the resulting resolution emphasized the importance of having a deep understanding of the party's and government's requirements on strengthening the country's defense capabilities and on having executives at all levels personally responsible for the practical performance of their civil defense duties.

Special lessons regularly conducted for members of the ispolkom help them to penetrate more deeply into civil defense affairs and to make competent recommendations.

Once for example it became necessary to conduct an integrated exercise in several schools together. The rayon division of public education provided the umpires. Following a short supplementary briefing from the rayon civil defense chief of staff, they successfully performed their duties.

Rayon civil defense chief Ye. Ryakhovskiy regularly brings up civil defense problems for discussion by the ispolkom. In this case the deputies first study the status of local affairs carefully. As a rule the ispolkom division chairmen, the chiefs of civil defense services, and executives of the farms, enterprises, organizations and educational institutions give reports at the meetings, which proceed in an atmosphere of benevolence and, at the same time, strict, fundamental exactingness. For example public education division director V. Voinov reported to the ispolkom on the status of civil defense instruction in schools of general education, rayon consumer union chairman D. Butsenko reported on civil defense preparations by the executive staff and the nonmilitary formations of his service, and on the progress exhibited in the minimum study program by persons not in these formations. Of course, other specialists gave reports as well. And each time the ispolkom responded with a concrete decision. Thus after discussing the question of creating and improving the training material base of civil defense at the rayon's national economic facilities, the ispolkom personally assigned specific duties to the rayon architect, to the directors of the divisions of culture and public education, to the administrators of the rayon "Sel'khoztekhnika" department, to the chief of the agricultural administration, to the rayon military commissar, to the director of the social welfare division, to the civil defense chief of staff and to the rayon's farm chairmen.

This relationship of the ispolkom to civil defense is fully in keeping with its spirit and essence, inasmuch as it is a matter of all the people. This approach makes it possible to expand the circle of people participating in public defense work. One worker is never made totally responsible for all civil defense functions. This means that functional responsibilities are fulfilled better.

The rayon civil defense chief always supports the good advice and useful initiatives of his chief of staff, V. Korkachev. In his directives to executives and to active soviet and farm members, he bases himself on the fact that the staff operates with the authority of an ispolkom division and that it satisfies the requirements of such a division. This raises the authority of the chief of staff, strengthens executive discipline and promotes establishment of closer relationships and comradely mutual assistance between workers of the ispolkom, and creation of an atmosphere of real collectivism and efficiency in solving civil defense problems.

The chief of staff himself also sets a good example for productive work. Having rich experience in party, soviet, business and Komsomol work, and an active participant of the Great Patriotic War, Vladimir Afanas'yevich raises civil defense questions in party and soviet organs on his own initiative and with some knowledge, and he works toward their solution with enviable persistence.

Without a doubt every local soviet is saddled with the most diverse concerns, both large and small, with long-range and current affairs and with the broadest range of functions. And it is quite right for the problems of civil defense and of its systematic and planned development and reinforcement to occupy an important place among them. After all, the highly humanitarian goals and tasks of civil defense are dear and comprehensible to the soviet people, who are performing their constitutional obligations of preparing for the motherland's defense with honor and merit.

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CIVIL DEFENSE

CIVIL DEFENSE PREPARATIONS DISCUSSED

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) pp 18-19

[Article by D. Solov'yev: "From House to House"]

[Text] No one in the Yemel'yanovo Town Soviet had any doubts: A socialist competition had to be organized during preparations for the integrated exercise. But how? Who was to participate in it?

Soon the oblast civil defense school duplicated and distributed documents prepared in Andreapol'skiy Rayon--a letter to the public and the competition rules. A decision was made to repeat the experience of other soviets, of course taking account of the local conditions. The letter was typed up at the printing office and sent to each house. Agitators were acquainted with the competition rules. The secretary of the party committee of "Krasnoarmeyets" Sovkhoz, Valentina Ivanovva Ryzhenkova, took charge of this work. The agitators were given the task of helping the competitors write up their pledges and then monitor their satisfaction.

The first results were summarized in a week. It turned out that far from all of the people adopted pledges. It turned out that some of the agitators defined their role very narrowly--that of telling, explaining and advising. But the competition also had to be organized. The results had to be fought for. And so the party committee and the executive committee of the town soviet convened for a joint meeting. The agitator group was reinforced, with most of the work being assigned to communists. Deputies of the town soviet were assigned to particular population centers and streets of the town of Yemel'yanovo. The active members were advised to begin agitation with a personal example.

In Every House

Town Soviet Deputy Praskov'ya Nikolayevna Pirozhenko looked over the rules for the competition among the residents one more time: They had to sew fabric dust masks--one for every member of the family, seal off windows and doors, have blackout resources available, remove trash and rubbish from attics and halls, set up a fire-fighting tool box and a sandbox with a volume of 1 cubic meter, acquire a household medical kit, keep the radio on and pass the standards of the 20-hour program. The standards had already been met, with a grade of excellent at that. But there was still much to do.

In the evening, using a pattern obtained from the town soviet, she sewed a fabric dust mask. She put it on and looked at herself in the mirror--everything seemed all right. She decided to show it to her neighbor, Klavdiya Ivanovna Orlova, with whom she was competing. She went to her house without taking it off.

"Did you sew one for just yourself, or for your children as well?" Orlova asked.

"Do you think I'd ever tell?" Pirozhenko laughed. "You won't get anything out of me. I'm going to win first prize for the best house."

Most people in the town of Yemel'yanovo have been living there since birth, and therefore news spreads quickly. Pirozhenko found herself entertaining one visitor after another. Those who decided to join the competition included deputy R. Druzdova and her neighbor L. Funtyakova, and deputies A. Komolov, L. Dmitriyeva, B. Sokolov and M. Rulev. And so it went from house to house, from street to street. No one felt it right to conceal his experience from others.

In the Villages

Those responsible for preparations for the exercise in the village of Panafidino included CPSU member T. Shkol'nikova, sovkhoz division director representing the party committee, and deputies V. Nikolayeva and M. Koshechkina from the village soviet. As with the rest, the first thing they did was to place their own houses in order. Appointed village elder, V. Nikolayeva quickly fulfilled the conditions of the competition: Iron bars were hung in two places to produce the civil defense warning signals, one well was sealed off according to all the rules by the combined efforts of the residents, and a model cow barn and storage shed were cleaned up and sealed off. They even found a bathtub that could satisfy the personal cleansing requirements for people.

Preparing a basement as a fallout shelter was harder. Each resident was storing potatoes and other foodstuffs in their basements and cellars, and no one wanted to move all of this food and disturb the routine for the sake of the training. They even argued that when the inspectors come, they could simply tell them what they would do if the situation required. To "compensate" for what they did not do, they set up tables and chairs in the cellars, placed flasks or cans of water there, and stocked 3 days worth of food packaged according to all the rules.

But then someone heard the rumor that party member T. Starshinova of the village of [illegible] had made the cellar of her own house into a fallout shelter. T. Shkol'nikova went there to see how she did it. The cellar was dug about a meter into the ground, and the logs making up its above-ground portion were about 60 centimeters high. A four-sided wooden tube with its end wrapped in burlap intended for filtration of radioactive dust stuck out of the air vent. "We could use a tube of that design," Shkol'nikova decided.

"What is the protection factor of your cellar?" she asked Starshinova.

"Fifty," Starshinova showed her on a plate nailed beside the air vent.

But the protective properties of any structure must be determined on the basis of the weakest link, Shkol'nikova objected, recalling what she had heard in the lessons for executives conducted by the chairman of the village soviet's executive committee, Ivan Ivanovich Orlov.

Returning home, Shkol'nikova reported what she had seen. She did not conceal her doubts as to the protective properties of the cellar. Three of them sat down to calculate how thick the earthen walls of a shelter must be to attenuate radiation by a factor of 50. The answer was found to be about 40 centimeters. The cellar in Valentina Anisimovna Nikolayeva's house seemed to them the best for converting into a fallout shelter. The three of them did the job themselves, deciding not to call in anyone else to help. When they showed their work to I. Orlov, the latter admitted that theirs was a model shelter.

At the Farms

The first to discuss the competition rules were the animal breeders of Sotchino farm. Their meeting went on and on. And not because someone was objecting to some point. Quite the reverse. Milkmaid T. Sizova said:

"We'll find all of this time beneficial."

They demanded accurate explanations from executive committee chairman I. Orlov, who was chairing the meeting. They wanted to know exactly what the importance of each measure was to defense. In essence the meeting transformed into a practical lesson. Orlov knew that R. Dubovikova, the senior zootechnician, who was responsible for this work as the chief of the animal protection service, had conducted the lessons just for the sake of filling squares, showing no concern for tying theory in with practice.

The first item in the competition reads: "Seal off the windows of the cow barn with available resources." Orlov asked: "Who can suggest what resources?" The milkmaids named tar paper, roofing felt, boards and plywood. All of the answers seemed to be correct. But when Orlov asked why the windows had to be sealed off, he found that many did not have an entirely clear idea.

And when the discussion turned to the item "Set up simple shelters for the duty shift," milkmaid V. Zolotova openly admitted:

"This doesn't make any sense to me: We've plugged up the windows, walls and doors of the animal barn, and we've made the animals safe from radiation--why build a shelter for people?"

Inspecting the animal barns, the commission representing the workers' committee noted that as in Zasheykova, the competing farm collectives in Sotchino had sealed off their animal buildings, covered their feed and prepared and used the equipment for thermal and chemical decontamination of hay and straw; they installed disinfection equipment in vestibules, and they disinfected the buildings from within; they removed feed wastes from the yards; they built fire tool boxes and stocked them with tools. Sandboxes with a capacity of 2 cubic meters each stood beside the animal barns. All of the stock breeders passed their tests on the 20-hour program.

Nevertheless the workers' committee of the sovkhoz trade union decided not to award first place to anyone. There were two reasons for this: Not a single farm set up a shelter for its duty shift, and as workers' committee chairman V. Petrova noted, the animal breeders did not always fully understand what they were doing.

In All Work Teams

The competition conducted during preparations for the integrated exercise proceeded in stages. After the basic measures were implemented in residential buildings, and then on the streets of the town of Yemel'yanova, the villages and the animal barns, it was the turn of the production teams. Workers of the production team in Apukhlitsy initiated the competition. This team served as the practical example. Everything required by the conditions was done quickly: The grain storehouse was prepared according to all the rules, three hay stacks were set up beside the animal barn as was a shelter made from available materials, a reasonable veterinary platform was set up to process the animals, protective masks and stockings were made for the breeder animals, and all laborers and white collar workers passed the standards of the 20-hour program.

Team leader T. Tsareva and workers K. Kozelkova and A. Komkova, who had done the best job of preparing their houses, visited the team in Molotinsk, which they decided to challenge in the competition. They were warmly welcomed. Of course, however, there was one complaint: Why did they hasten to fulfill the conditions of the competition, thus placing their rivals on an unequal footing? In the end, they agreed on one thing: The quality of all of the measures was what was most important. Team leader T. Korneva and workers A. Khrustapeva and A. Tolkalova signed the pledges for the Molotinsk team. These people were then ordered to visit Apukhlitsy to learn what they could.

But this would be a good point to mention one of the mistakes made by the competition organizers. Seeing that the effort had aroused the interest of people everywhere and that there was an intense desire not to be left behind, the trade union workers' committee decided that things should proceed to their conclusion successfully without their interference, and so they weakened their control over pledge fulfillment. This is precisely why the team failed to dig slit trenches and to set up other simple shelters. This deprived the team collectives of their prizewinning places.

In Other Labor Collectives

There are many other facilities on the territory belonging to the Yemel'yanova Town Soviet. They include "Arkhangel'skiy" Sovkhoz, a secondary school, a trading enterprise, a sewing shop, the section hospital, a bakery, a communication division and a creamery. Fulfilling the conditions of the competition, the collectives of these facilities sealed off their buildings, acquired firefighting tools and medical kits, practiced what to do in response to civil defense warning signals and built simple shelters for the work shifts. All laborers and white collar workers passed the standards.

The paramilitary formations also completed their pledges successfully, and they acted competently in a special tactical exercise, earning a satisfactory grade.

Here is what S. Zaytsev, chief of staff of "Krasnoarmeyets" Sovkhoz, had to say about this:

"Before the last exercise we participated in, we had to summon the commanders to the control post in order to determine what the status of the formations was. But this time I never had a single hour a day to spare: The staff had to answer numerous questions from everyone."

I deliberately said nothing about the course of the exercise itself. It should be clear to everyone that if the preparations are good, success would be ensured. And such was the case. Here is what was said about this by Zoya Iosifovna Mikhaylova, first secretary of the Staritskiy Rayon CPSU Committee, as a participant of the exercise critique:

"If we compare with what we saw in other town soviets and at other facilities, our exercise was the most instructive. It is noteworthy that there were no observers--everyone took an active part. We were persuaded once again of the living force of competition, which helps people develop all of their best spiritual qualities and serve as a personal example. We will try to dissiminate our experience throughout the entire rayon."

Many of the participants were honored in orders published by the civil defense chiefs of the town soviet and the national economic facilities. The competition prizewinners received money prizes, certificates, letters of gratitude and souvenir group photographs.

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COL A. ZAYTSEV VIEWS CIVIL DEFENSE TRAINING

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) p 22

[Interview with Colonel A. Zaytsev: "The Goal--Good Results"]

> [Text] The Soviet people are laboring in the 11th Five-Year Plan in an effort to raise effectiveness and quality in all spheres of activity. Motivated by the desire to achieve high end results and to seek out unutilized reserves, the readers of our journal are not standing on the sidelines of this whole people's movement. Their letters contain many questions and proposals concerned, in particular, with improving civil defense training. The editorial board asked Colonel A. Zaytsev, division chief of the Combat Training Administration of USSR Civil Defense, to comment on the mail from the readers and answer some of their questions.

[Question] A number of letters contain the thought that the most dependable criterion of training quality is the ability and capability of people who have undergone training to solve civil defense problems in accordance with their functional responsibilities. In other words every effort in civil defense training must be evaluated on the basis of its end results.

[Answer] Teaching people to act knowledgeably, quickly and confidently, to maintain self-control and to not yield to panic in the most unusual and difficult conditions is the task, and the end result, of civil defense training. The lessons, exercises and training are important not for their own sake but as a means of attaining the main goal. Each person must be so well trained that he could act correctly when necessary, depending on the situation. As time goes on, this task is becoming increasingly more complex, rather than simpler.

Imperialists are forcing creation of new weapons, to include the most destructive and inhumane. The USA allocates fantastic sums of money to development of new forms of weapons. Naturally under these conditions the defensive resources cannot remain unchanging either. We can no longer make do today with knowledge that we picked up 5 or 10 years ago.

[Question] In this connection, what can you reply to that segment of our readers who wonder why the 20-hour program must be studied each year, rather than once every 3 years or, for example, 5 years?

[Answer] To make the answer more convincing, let me make an analogy with studying safety rules. We know that most specialists (crane operators, welders, electricians, cutters, slingers and others) must be recertified each year in relation to safety rules. And this is true even in light of the fact that they encounter situations requiring strict fulfillment of the rules every day.

The civil defense standards need not be fulfilled in our daily lives. But at the same time the appropriate knowledge and habits must be maintained at a sufficiently high level. Without systematic training, this requirement cannot be observed. We can in no way agree with those who suggest introducing a system of one-time exams covering the 20-hour program, to be taken by individuals at the time they are hired for work. In this case many persons would study the resources and methods of protection from mass destruction weapons just once, which is clearly not enough.

It is only through repetition that the individual can learn to perform the procedures efficiently and make his actions automatic. It is no accident that the organizational and methodological instructions attached to the program of universal mandatory minimum knowledge state that the knowledge of the students must be deepened and broadened in each following year, and that their practical habits must be improved. Incidentally, this idea is also contained in most of the readers' letters.

[Question] While they agree with the need for regular and systematic study, certain readers suggest the opinion that studying the same program each year reduces the activeness of the students and their interest in civil defense.

[Answer] What reduces their activeness, I would say, is incompetent, stereotypic repetition of the program--that is true. We still encounter cases in which lessons are conducted from one year to the next using the same lessons plans, without regard to contemporary data, the features of the audience and its higher level of education. Few specialists are encouraged to participate. Such a nonproductive waste of time cannot but elicit a negative attitude in the students. Failing to receive new, deep and substantial information in the lessons, they generally lose interest in civil defense measures. We cannot condone such a situation.

[Question] The facility civil defense chiefs of staff are well aware of this requirement, but far from all of them observe it. Could there be, in all probability, certain causes hindering a transition from simple and rather monotonous repetition of the 20-hour program to its creative assimilation?

[Answer] One of the causes is a stereotypic approach to creating the study groups and working with them. At the moment, unfortunately, the preparedness of the people making up the groups is extremely rarely accounted for when the groups are formed. This noticeably reduces the quality of the lessons, and it limits the possibility of applying diverse methods, and consequently of achieving higher end results.

The editor's mail confirms another observation. We cannot start the lessons each year from ground zero, as if the individual to undergo the training has never heard about civil defense before. We must always keep in mind the reserve of knowledge and skills he has accumulated, and rely on this dependable foundation.

The work experience of the best lesson leaders tells us that it would be useful to make assistants out of the best-trained students, especially in practical lessons.

[Question] The principle of yearly repetition of training applies not only to those studying the 20-hour program but also the command and staff, and their formations. What can you reply to our readers wondering about the ways of improving the results of training afforded to nonmilitary formations?

[Answer] In order that formation warriors and commanders could understand one another and have a clear idea as to where their equipment is going to come from, as to how the tools and instruments are to be used and as to how to interact with other subunits, and in order that they could competently complete all of their tasks, they need to train long and hard. This is why the personnel undergo constant training at yearly practical and special tactical exercises and lessons. We cannot do without repetition in this area. All the more so because the composition of the formations changes each year.

In this connection I would like to emphasize the role of the special tactical exercises, which are conducted as a rule with several formations participating. This is the principal form of training in which coordination is developed (not counting integrated exercises, of course). A dependable reserve for raising the skills of formation personnel can be found in improving the organization and methods of the special tactical exercises. Unfortunately this topic is not discussed in the readers' letters as often as one would wish.

[Question] Judging from the editor's mail a certain 3-year training system has evolved at some national economic facilities. What are its features?

[Answer] Yes, some facility defense executives and staffs making long-range plans believe it necessary to organize the training in a progressive system. Thus in the first year all of the training undergone by the command and staff, by laborers, by kolkhoz farmers and by white collar workers is directed mainly at the new requirements and ideas on organizing and managing civil defense, at acquiring knowledge, and of course at gaining skills.

In the following year the emphasis is laid on improving and strengthening the practical skills of all groups of students. Thus while the program remains the same, as does the time allocated to it, the number of practical lessons and training exercises increases, and their intensity rises. Competitive forms of training are often practiced: The personnel compete in fulfilling the standards.

In the third year everything is concentrated on preparation for an integrated exercise--the lessons in the 20-hour program, the special tactical exercises and the command and staff exercises. Each of the forms of training mentioned here serves as a step on the road to the end result--achieving maximum civil defense preparedness at the facility.

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STRENGTHENING CADRES FOR REGIONAL CIVIL DEFENSE TRAINING

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[Article by special correspondent G. Prikazchikova: "Not Only on Orders: The Microclimate in Civil Defense Schools"]

[Text] Finding and retaining personnel for rayon civil defense schools is a complex problem. Because of a shortage of workers and personnel turnover, a number of schools are unable to complete their planned assignments, and the quality of the training suffers. What more can be said, the situation is serious, but is it really all that hopeless?

Actually, the way the overall situation is, it would be hard for us to count on an influx of forces of any significance into the schools in the near future. Therefore we must seek internal reserves and analyze and eliminate the causes promoting personnel turnover, remembering that the vaguely put excuse for leaving, "for personal reasons," often conceals motives indicating something generally wrong in the collectives.

Among the reasons for leaving encountered the most, masters of production training usually name the working conditions: frequent business trips, a diversity of responsibilities, the microclimate that has evolved in the collective and the lack of prestige associated with the job.

There is nothing surprising about this last reason. As a rule the people that come to work in the schools have had a great deal of experience in life, and sometimes they had formerly occupied important posts. But in the schools they find themselves in the position of apprentices for a certain amount of time. Some of them, unable to endure the "trial period," which is something inevitable when an abrupt change occurs in the nature of a person's activity, prefer to leave, never having experienced the attractive sides of their new jobs. And when another statement of departure "for personal reasons" lands on the chief's desk, the disheartening search for another worker begins, and meanwhile the work must stop.

Recently I became acquainted with a collective in Kostroma with extremely remarkable stability. I am referring to the civil defense school of Sverdlovskiy Rayon (chief, G. T. Bezzubov; masters of production training, R. F. Bol'shakov, G. N. Korepanov, Yu. F. Lukin). The present staff has been working together for almost 10 years--this is enviable constancy. All are communists and reserve officers, and three have served in military construction units, and endured the war and the front. They ended up the civil defense system--they themselves feel--in many ways by chance.

While in a hospital following a car crash, G. Bezzubov came to know the oblast civil defense chief of staff. The latter advised him to apply to the civil defense school, which luckily had some vacancies at that time, since his dismissal from the army would be inevitable due to his injuries.

Georgiy Timofeyevich spent a year at his post as master of production training, but he did not become disenchanted, though he did manage to experience its difficulties and pitfalls. He obviously had the knack of an instructor, and he had enthusiasm, without which the duties of a rayon school worker sometimes transform into a burdensome and almost unpromising pursuit.

A former army political worker, he found his second calling here, and he valued his new place of service because it afforded him a possibility for communicating with the broadest range of people. He experienced true joy whenever he saw that the labor he invested did not fall by the wayside, and that his words had some effect. To him, these moments have been and are the real payoff by which to measure the prestige of a master of production training.

At first, moments such as these were far apart: He lacked knowledge, experience and teaching skill. He still gratefully remembers the names of his mentors: former rayon school chief S. Ye. Kuz'menkov, under whose direct supervision he began his work in civil defense, former oblast school chief A. V. Meshkurov and others.

"After a year I was appointed chief of the rayon school," recalls Georgiy Timofeyevich. "It was then that I came to understand especially clearly that I could always count on support in a difficult moment. This helped me a great deal in the beginning. The chief of the oblast school was perpetually interested in how things were going for us and in whether or not we needed help. He was concerned for me, hoping that I would not quit in the face of the first difficulties and that I would find the inner strength to endure my failures. Not only did I sense support in this attention; I also saw that people believed in me, and that made me feel I had to justify this trust."

The three masters of production training began their activities in the school in about the same way, helped along with good advice from experienced comrades. Is this not one of the reasons behind the collective's present stability?

There was humor in Gennadiy Nikolayevich Korepanov's voice as he told me about his first steps as a school worker:

"For almost a month I delved into the material, I diligently took notes on it, and I took lessons from experienced instructors. And when the time came to give a trial lesson, I made an effort to shine: I laid out all that I knew about the subject. You can imagine the way the class turned out. I was distressed, of course. During the critique it was explained to me in a friendly manner where I went wrong. To me it was a lifelong lesson. Experience is something that will come, as long as there is the desire to work. But if there is no interest in such activity, I believe it would be better never to come to the school."

These people have not only a common army past, but they also exhibit a rare unanimity (despite the difference in their characters) in their opinions of their work and in their attitude toward it. Thus they have never had the occasion to bring up the topic of discipline--there was never any need, but all four feel, for example, that coming to work late is impossible or, more accurately, dishonorable. And what counts here is not the apprehension of a reprimand but that inner self-discipline which keeps one from transgressions or laxity more dependably than the threats of the severest punishment.

In this connection one of the letters received by the editor's office comes to mind. The chief of a rayon school asked whether or not he had the right to impose disciplinary sanctions upon his subordinates. I felt from the content and tone of the letter that its author had nothing to rely on but the force of reprimands and warnings published in orders, other measures of influence being ineffective.

When mutual understanding disappears in a collective and when the trust and mutual exactingness necessary for successful work give way to suspiciousness and petty quarrels, the question of "disciplinary sanctions" arises as a rule. Unfortunately even when imposed in compliance with all rules of labor law, such orders rarely guarantee an improvement in the psychological climate. A frequent result of such orders is another statement of resignation "for personal reasons."

A good microclimate can be created in a collective, and all the more so in a small one (just four to seven persons) as encountered in rayon or city civil defense schools, only through joint effort and only if the workers have a general desire to maintain their relationships on the basis of respect, trust, mutual exactingness and comradely mutual assistance. The sort of relationships that evolve between the school chief and his subordinates are very important in this case.

"I feel," notes Georgiy Timofeyevich, "that the 'big boss' image some school directors try to create for themselves is not the best. School collectives are small, it's life in a fishbowl, and it makes no sense at all to treat one's position as something special. It is all the more unwise to set oneself apart from the other members of the collective. But unfortunately such things do happen. For example when a school chief does not wish to conduct a lesson, he finds all sorts of excuses to shirk his responsibility. The obvious question is, can such a person really direct the training and the teaching, can he really monitor the quality of the lessons conducted by others if he himself has no concept of what this work entails?"

The masters of production training spoke even more categorically. In their opinion the chief must know and know how to do everything required of a master, except a little more and a little better. This is why it would be desirable for him to first work for a while as a simple master, as their own chief did. And if for one reason or another a person does cross this threshold, he must then listen tactfully to the opinions of his subordinates, to their advice, proposals and wishes, especially when they originate from knowledgeable and experienced people.

It would seem to be a simple thing--scheduling the lessons and planning the study load, but so often it elicits friction in the collectives. Naturally the last word is with the chief, but this does not mean that he need not consider the personal interests and wishes of his people, so that they would work with enthusiasm and so that their job would be pleasant to them and produce high results for them.

Georgiy Timofeyevich does not feel as if he is lowering himself when he takes advice from subordinates and listens to their opinions. He wishes a master of production training to be a like-minded person, and therefore he does not simply issue orders to him; instead he explains the nature of the assignment and persuades him of its importance and necessity. Such was the case, for example, when they had to come to the assistance of the oblast school, which found itself in a difficult position. Although their own schedule was rather tight, the rayon school workers took on the additional load--they conducted some of the lessons together with the military instructors, and they conducted them successfully.

Faithful to the saying "two minds are better than one," they have become accustomed to resolving all difficult problems together. However, they never exhibit excessive familiarities in their relations, and while the masters of production training often refer to each other on a first name basis, they do not permit themselves any familiarity with their chief. Despite their 10 years of work together, and their mutual respect and attachment, they observe their distance. There is obviously some value in this as well.

Personal example is believed to be the best method of developing the qualities of personnel. This is why Bezzubov at first performs the difficult assignments himself. Of course this does not mean that he makes it easy on his subordinates. No, he is demanding of them, and he is strict. He has simply gotten used to trying out each task on himself at first, after which he could judge the work of others, the possible difficulties and the ways of surmounting them more objectively.

Besides Kostroma's Sverdlovskiy Rayon, the school provides services to another six of the oblast's rural rayons. The most remote point takes not less than 5 hours to reach by train and a bus trip. This is the way they worked before there was an auto club. But even now that they have a car, they still have to make their trips in stages--there is no driver.

Trips out into the rayon are made as a rule by two persons, so that the lessons could be conducted, the work could be done at local facilities and help could be provided in exercise preparations more successfully. They now work in teams: Bol'shakov usually travels with Korepanov, and Bezzubov travels with Lukin. Training films are a necessary element in the plan for each trip. Striving to make the training process more visual and effective, all four have learned to work with the film projector, and now they are quite professional in this effort

It is no accident that eliciting interest , attracting attention and achieving better assimilation of the material are their most frequent topics of conversation. The students attending the school today are totally different from what they were 5 or 6 years ago. They can no longer be satisfied with the general issues, or all the more so with hackneyed truths. They are more informed about civil defense, and they place greater demands upon their instructors: They want the study suject to be illuminated deeply and concretely, and they want the material to be tied in with the local conditions, so that each lesson would provide real, tangible benefit.

This is a fully understandable and justifiable desire, but can it really be satisfied if a candidate of science is studying in one group with a fitter? And how can we avoid repetition when the program remains constant? We must be constantly ready to respond to that rather spiteful phrase on entering the classroom: "But we've already gone through that material." They always discuss these and other problems of no lesser complexity after visiting local facilities and fulfilling other functions in the school plan.

All of this causes them concern, and they discuss it after lessons, during monthly teaching conferences and at other times. Sometimes the discussion transforms into a heated debate, but this does not lead to fundamental disagreements. The reason for this is that they are guided in their debate not by personal aspirations or ambitions but by the interests of the work, by the desire to find the truth and to reach a common viewpoint. "We are persons of like mind," one of them noted during a conversation, "and this is perhaps what holds the collective together most of all."

It is said that you have to work for what you get. As far as prestige (authority, respect in the eyes of others) is concerned, this collective has it, having earned it through years of conscientious work. This collective is valued in the rayon and at the oblast civil defense headquarters for its knowledge, its honorable attitude toward its work and for its enthusiasm, still high after so many years.

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CIVIL DEFENSE

DEPUTY CHIEF USSR CIVIL DEFENSE MIKHAYLIK LOOKS AT TRAINING RESULTS

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) p 27

[Article by Lieutenant General D. Mikhaylik, USSR civil defense deputy chief: "We Summarize the Results"]

[Text] The editor's office of VOYENNYYE ZNANIYA raised an important question: What should the training classroom be? Apparently the time has come to summarize the results of a rather extensive discussion.

First of all I would like to thank those comrades who showed interest in this important matter, and explain what civil defense classrooms we are referring to here. Classrooms are created at national economic facilities in various educational institutions, at housing operation offices (housing administrations), and in civil defense schools and services in accordance with the Statute on the Civil Defense Training Material Base. Naturally they cannot all be the same; each of them has its unique features. The statute states rather clearly how many classrooms there should be in civil defense schools and other educational institutions and what these classrooms should be like, with regard to the requirements they must satisfy. Therefore we will limit our further discussion to classrooms created at national economic facilities, viewing them as an inherent part of the training material base. As is emphasized by the statute, the training material base consists of training grounds, training centers, training classrooms (offices) and civil defense nooks. This means that the classroom is just one element of the training material base, one which must be examined in integration with the others.

Of interest in this regard is a letter from V. Rudominskiy (Kursk). He suggests that "...the classroom should contain a light and sound simulation system to create the appropriate situation and emotional effect upon the students," forgetting that there are training grounds for this purpose, at which the necessary situation can be created and where such simulation is performed. The classroom cannot serve as a substitute for the entire complex of the training material base.

The main thing in setting up any classroom is to take full account of the audience that will study in it, so that the main civil defense issues could be assimilated better and more deeply. The classroom must be in keeping with the requirements of the program, and it should account for the particular production features and the defensive measures unique to each concrete facility.

That statute (Article 41) states: "The content of study questions and training methods is to be revealed in civil defense classrooms on display stands (showcases, revolving displays), which must be simple and readily visible, and easy to understand, and illumination of the questions must be sufficiently deep and persuasive, so as to nurture high moral-political, psychological and patriotic qualities in the students." But nowhere is it stated that "the texts of training manuals and guidelines are to be transcribed and posted on the walls." G. Paleyev validly criticizes this procedure in his article.

Every facility sets up its classroom on the basis of its own possibilities. Therefore some turn out better, and others worse. Of course it would be nice to have splendid furniture and beautiful light fixtures on the walls. But this is far from the main factor associated with lesson quality.

Let us turn once again to the Statute on the Civil Defense Training Material Base. Article 34 states: "The civil defense training classroom (office) is a specially equipped room in which not less than 25 persons can undergo training simultaneously. The classroom must contain the necessary quantity of furniture, technical training and testing resources, projection equipment, electrified mock-ups, personal protective resources, reconnaissance and dosimetric monitoring instruments, displays (revolving displays, showcases) and posters. The content and quantity of training and visual aids contained in classrooms (offices) depend on their purpose."

The entire essence of the debate rests upon the amount of various materials contained in the classrooms. Clearly they must contain a limited number of displays which would clearly and persuasively make the students aware of the basic issues of protection and of the means of conducting rescue and emergency reconstruction operations. V. Mamontov, a master of production training at a Moscow rayon civil defense school, is quite correct when he writes that classrooms need "...panels, electrified displays and other visual aids that would reflect the main tasks of civil defense and help the students assimilate the basic material better. Hanging panels bearing voluminous texts should never be allowed."

Some comrades try to convert classrooms into lecture rooms and rooms for other theoretical lessons. But we must not forget that practical lessons are the principal method of training all categories of students. As it is, civil defense classrooms should also satisfy this requirement to the maximum. Lessons which cannot be conducted well in the classroom should be organized at training grounds, in shelters or right in the shops.

At the same time stuffing classrooms with informative and propaganda materials is not recommended. For example materials such as photographs, diagrams, posters and other items providing information on previous exercises, on training progress and on the best civil defense workers, and displays bearing information on the USSR Armed Forces could all be located quite adequately in the entrance hall or in the corridor beside the classroom entrance. A classroom should not be equipped on a permanent basis. It must be prepared in keeping with each lesson, each study subject. This is why movable and removable displays are so valuable. They must be utilized effectively. At the same time no quantity of displays would ever replace the potentials of technical training resources.

Equipping classrooms with technical resources is difficult but necessary. They help significantly improve lesson quality and dramatically increase the results. Students acquire concrete knowledge and skills that they would need in their practical activities.

In recent years many have shown preference toward various types of projectors, especially ones used with filmstrips and slides. This can be explained by the fact that filmstrips and slides make the training more visual and informative at extremely moderate cost, they make storage of large posters unnecessary, and they make it possible to efficiently supplement the training process with new materials. Moreover, projection technology is rather simple. Many facilities have started preparing their own slides, and this is very important.

Unfortunately some facility civil defense chiefs of staffs have taken the easy wav out: They show a movie, and treat this as a complete lesson. However, movies cannot claim an independent role, and all the more so a dominant one, among the other forms and methods of training. Movies are not a substitute--they are only a supplement, being one of the tools of influence upon the students.

Every civil defense classroom must be fully in keeping with its main purpose--creating the best conditions for effective training. Thus not only must it be attractive and tastefully decorated, but it must also correspond to the stiffest requirements, they must satisfy the present level of development of civil defense.

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CIVIL DEFENSE

CIVIL DEFENSE TRAINING IN IVANOVO VARENTSOVA FACTORY

Moscow VOYENNYYE ZNANIYA in Russian No 8, Aug 81 (signed to press 10 Jul 81) pp 10-11

[Article by A. Solobay, party committee secretary, Ivanovo Weaving-Finishing Factory imeni O. A. Varentsova: "As Befitting of Communists"]

[Text] Inspired by the historic decisions of the 26th CPSU Congress, the collective of the Ivanovo Weaving-Finishing Factory imeni O. A. Barentsova adopted high socialist pledges in the first year of the five-year plan and is making a persistent effort to satisfy them.

In addition to fulfilling their business and sociopolitical tasks, the factory management and the party committee are devoting constant attention to the problems of reinforcing and improving civil defense. After all, the Communist Party's appeal has struck the heart of every Soviet patriot: "All that has been created by the people must be dependably protected."

We attach great significance to training the executive staff and command of the civil defense formations. In the last 3 years all service chiefs and formation commanders have undergone training in oblast and rayon civil defense courses. Moreover each year we conduct a 35-hour program of practical lessons for the command and staff at the facility. These lessons are led by the facility's civil defense chief B. Buznetsov, by chief of staff A. Khrapov and by experienced specialists of the services.

At its meetings, the party committee periodically hears reports from the chief of staff, the service directors and individual formation commanders on their progress in fulfillment of their civil defense obligations, and it makes concrete decisions. Each year the party committee examines the results of training in the civil defense system and directs the party, trade union and Komsomol organizations to complete the planned civil defense measures in the new training year with high quality. The status of civil defense propaganda is also discussed at these meetings, and its annual plan is approved. In March the party committee gave audience to a report from the civil defense chief of staff on the goals and tasks of the forthcoming integrated facility exercise, it adopted the corresponding resolution, and it confirmed the plan for party-political work, aimed at promoting high quality preparation for this exercise and its conduct at a high organizational and methodological level.

Purposeful political indoctrination has the decisive influence on the moral and psychological preparedness of formation personnel. Deputy commanders for political affairs, political information officers and agitators learn the practical aspect of this work in special seminars organized by the party committee. Last year the Oktyabr'skiy Rayon CPSU Committee conducted a one-day seminar for the political staff on the same problems. Raykom first secretary Z. Smolina and workers of the oblast civil defense staff gave substantial reports during this seminar.

Many of our political workers are performing their responsibilities knowledgeably. Take as an example O. Zernova, the deputy commander for political affairs of a composite squad of master electricians from the electrical division. She knows the formation's warriors and their moods well, she influences them competently, she constantly involves herself in lesson organization, and she provides help to group and crew commanders in this work. The squad is fully manned and outfitted with everything it requires, and it is always ready for action. And in exercises, it invariably displays high organization and coordination. This was clearly manifested during an emergency that arose in February of last year, when the food services block and some of the factory shops found themselves in danger of flooding due to a problem with the sewage system.

Other communists also relate thoughtfully and creatively to their party obligations. For example medical team commanders and political workers N. Dripko, N. Demakina, A. Perfiliyeva and N. Somova maintain an active position in relation to medical defense work. As a result a good volunteer donor system has developed at the factory. "Donor days" were held three times during the year, with hundreds of patriots participating. Thirty-two of them were awarded the "Distinguished USSR Donor" badge. The medics also concern themselves with preventing influenza, gastrointestinal and other infectious diseases.

Socialist competition is helping to improve the status of civil defense. Each month, when progress in satisfying adopted pledges is summarized, the factory committee and the director's technical council consider progress in civil defense measures as one of the performance indicators.

The factory's communists associate concern for raising civil defense preparedness inseparably with continual improvement of ideological work and political indoctrination, taking their guidance from the CPSU Central Committee decree on this problem. Conducting factory-wide political days, the party committee makes sure that communists and the entire collective are well informed about the party's domestic and foreign policies. Much attention is devoted in this case to the problems of military-patriotic and moral indoctrination, to civil defense publicity, and to formation of high moral-political and psychological qualities in the entire collective. The forms of propaganda are diverse. They include meetings with prominent people of the kray and with veterans of the Great Patriotic War and of the USSR Armed Forces, seminars, discussion evenings, question-and-answer evenings and so on. A civil defense propaganda faculty (lecture course) organized by the people's university of the factory club occupies a special place in this effort.

In the 10 years of their existence, the lectures have confirmed themselves as an effective form of propaganda. The faculty does its work in the shops and in the production sections. It gives lectures and shows movies according to a plan written previously and coordinated with the factory party committee. Invitations to the upcoming lectures are distributed in the shops in good time. The lectures are given by facility civil defense chief of staff A. Khrapov, personnel division chief V. Matviyevskiy, chemical laboratory chief engineer V. Polyakov, health center director P. Kolomiyets, shop chiefs L. Frolova, K. Borisenkova and Yu. Medvedev and other specialists and active civil defense workers.

Discussion evenings on specific subjects have become popular in the collective. As an example more than 500 laborers and white collar workers came together for an evening discussion on the subject "All That Has Been Created by the People Must Be Dependably Protected," which was held in the factory's summer theater. Medics gave speeches to the audience. Teams representing a number of formations participated in a quiz entitled "Things Everyone Should Know and Know How To Do."

The factory civil defense training center plays a great role in agitation and propaganda. The three classrooms of this center are equipped in accordance with recommendations of the USSR Civil Defense Headquarters. It is a good base for training all categories of students. Incidentally it is also in constant use by students of the textile institute and by schoolchildren of Secondary School No 32.

Our primary organization of the "Znaniye" society, which is headed by Communist M. Blyumkina, is also making its contribution to civil defense propaganda. Many speeches by propagandists on civil defense subjects are foreseen in the lecture and discussion plans.

Competently combining production affairs with planned civil defense training and propaganda, the factory's communists measure their work up to the party's high requirements. The enterprise contains many nonmilitary formation commanders and deputy commanders for political affairs, experienced and respected producers and organizers possessing good professional and political knowledge. For example CPSU member I. Filatova, a production controller in the dyeing operation, has been a medical team commander for more than 8 years. She knows her business to perfection, and she requires the same of her subordinates. She knows how to ask her warriors to do things, how to inspire them and how to raise their fighting mood. And it is no accident that her team is said to be one of the best, and that it always takes prizewinning places in competitions. Communist N. Toropina (foreman of a weaving section), commander of the rescue group, not only imparts good professional knowledge and civil defense skills to the warriors of her formation, but she also nurtures a conscientious attitude toward their duty, firmness and the ability to endure hardships and deprivations.

The administration, the party committee and all active civil defense workers of the factory feel it is their task to devote full effort to communist indoctrination, to make their contribution to strengthening our motherland's economic and defensive power.

However, despite the successes, the possibilities are not being fully met yet. We must intensify party-political work so that the task of improving civil defense could be completed more effectively and better. Alas, sometimes the party committee itself fails to judge, with sufficient exactingness, the personal contribution made by each communist to the area of civil defense assigned to him. Some comrades lack the skills of using the resources of party influence in the conduct of public defense functions.

In a word, there is still much to do before each communist can become a true propagandist of civil defense.

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CIVIL DEFENSE TRAINING IN VORONEZHSKAYA OBLAST

Moscow VOYENNYYE ZNANIYA in Russian No 8, Aug 81 (signed to press 10 Jul 81) p 13

[Article by P. Gorbunov: "Into the Piggy Bank of Experience"]

[Text] Much attention is devoted in decisions of the 26th CPSU Congress to introducing advanced skills into all sectors of the national economy. This has as much a bearing on those who are involved in civil defense functions. After all, all new and progressive things that appear in the civil defense system must be carefully collected together, analyzed and generalized.

This function is performed in the RSFSR State Committee for Supply of Production Equipment for Agriculture (Goskomsel'khoztekhnika) by a section under the command of F. Kordyukov. This section is not very large in size, but it does a great deal of work associated with generalizing and introducing experience.

As an example there is a motor vehicle repair plant in the city of Ostrogozhsk, Voronezhskaya Oblast subordinated to this administrative department. It has been awarded the perpetual Red Banner of the oblast executive committee many times for its successes in civil defense competition; the banner has now been entrusted to this plant for permanent safekeeping. And so a decision was made to thoroughly study the experience of this facility and make it available to other enterprises.

First, N. Pertsev, the plant civil defense chief of staff, gave a speech at a rally on training methods held for civil defense command and staff. He did an excellent job, supporting his narration with diagrams, graphs and samples of the documents he had worked up. He brought newspapers with him discussing the Ostrogozhsk experience, as well as leaflets and photograph albums. In a word, everyone who listened to Pertsev gained a rather clear idea about civil defense affairs at this facility.

And locally, the civil defense staff of Voronezhkaya Oblast conducted an integrated facility demonstration exercise for rayon executive committee chairmen at the Ostrogozhsk Motor Vehicle Repair Plant. Someone had the foresight of including a group of general directors and civil defense chiefs of staff from production associations of the RSFSR Goskomsel'khoztekhnika in the exercise. There were many visitors to Ostrogozhsk. And there were many things for them to see. The facility was in fact a model enterprise. In addition to the staff, the general director and civil defense chief A. Litvinov, party committee secretary Ye. Yegorov, plant committee chairman A. Seleznev and komsomol committee secretary A. Vetrov involve themselves deeply in civil defense problems. Once the leadership sets the example, the entire labor collective rises to the task. Comrades from the RSFSR Goskomsel'khoztekhnika turned the attention of the general directors to something else: Here in Ostrogozhsk, civil defense is not forgotten when the monthly production plans are summarized. Adequate performance is demanded in both one area and the other.

Visiting workers made note of everything they felt they could use at home. They literally beseiged the population of Ostrogozhsk during these days. They were interested in everything: how exercises were planned and prepared for, and how such good coordination, excellent support and high preparedness of nonmilitary formations were achieved.

Thus two forms of generalization and introduction of advanced skills can be clearly discerned in the state committee: speeches by the civil defense chief of staffs of the leading facilities at training method rallies, and demonstration exercises. But what else has experience given us?

Good results are achieved in visits by the chiefs of staff of the best facilities to those that fall behind. The same N. Pertsev has made such trips many times. His one goal has been to help correct the situation and transmit his own experience. Here is another method that is encountered. Assume for example that serious shortcomings are revealed in one of the technical civil defense services--in the training of the staff and subordinate subunits. In response a command-and-staff exercise is planned, and civil defense workers from another oblast having rich experience in preparing and conducting exercises are invited in. This was the case on Sakhalin and in Chelyabinsk.

Comrade Kordyukov brought up a few more examples associated with introducing advanced skills. In particular, things were not falling in place in the civil defense plans of a number of facilities and a few rayon technical services. The best plans were gathered together and studied, and model plans were drawn up, duplicated and distributed locally. Moreover the civil defense chiefs of staff of the best facilities themselves participated actively in this work.

Inspections are broadly employed as a means for generalizing and introducing advanced skills. Preparing for them before visiting local facilities, inspectors receive their assignment, indicating which of the accumulated experience should be introduced and what new things need to be revealed and studied locally. Thus useful experience is brought to local attention more efficiently, and simultaneously new material is accumulated, to be discussed subsequently in periodical reviews.

But it was found that such reviews could not do credit to all of the accumulated experience. And so an idea was born--publishing pamphlets on the experience of the best facilities in improving civil defense. The first--about the Ostrogozhsk Motor Vehicle Repair Plant--has already been published. Next in line is a pamphlet on the affairs of rayon civil defense technical services in Moscow Oblast. Recently the main engineers of the rayon associations in this oblast attended the oblast civil defense courses (all of these engineers head the staffs of the appropriate technical services). The first question to naturally arise is: To what extent are such lessons tied in with exchange and introduction of advanced skills?

"In the most intimate fashion," replied V. Molokin, a section chief of one of the oblast's associations. "Everything new that we accumulate I try to transmit to the students at the lessons, which I conduct myself. Were the subject to be planning, I would have before me a freshly prepared sample of a model civil defense plan. This plan would account for everything that has been tested by experience. The lesson would be a practical one. Each student can make corrections in his own plan so as to account for everything new and progressive."

Much time is devoted to the methods of integrated facility exercises, to command-and-staff exercises, to staff training sessions and to practical lessons for the commanders of nonmilitary formations. Materials written on the basis of the experience of the Dmitrovskiy Rayon Association are readily available. Also available are materials on training methods, diagrams, graphs and photographic albums describing an integrated exercise conducted at the Krasnopakhorsk Machinery and Repair Plant, and efficiency proposals on using self-contained electric power sources for civil defense purposes, generalized by Comrade Molokin and mimeographed. Molokin uses all of this material productively in his lessons with chief engineers.

Some of the apportioned training time is specially used for exchange of experience. The students of the civil defense courses themselves describe the new and interesting things in their organizations.

The scientific-practical conference--one was recently conducted in the association--has become an important form of generalizing and disseminating advanced skills.

The things discussed above can serve as a good example for all other ministries and departments.

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CIVIL DEFENSE

YOUTH TRAINING CONFERENCE IN UZBEKISTAN REPORTED

Moscow VOYENNYYE ZNANIYA in Russian No 8, Aug 81 (signed to press 10 Jul 81) p 16

[Article by Colonel N. Vitrenko: "The Scientific-Practical Conference Has Ended"]

[Text] The republic scientific-practical conference in Uzbekistan on the subject "Status and Measures of Further Improvement of Civil Defense Training for Young Students" was preceded by more than 3 months of effort to study and analyze the accumulated experience. The conference was attended by representatives of a number of ministries and departments, the civil defense headquarters of the Uzbek SSR, the military commissariat, the Komsomol Central Committee, the DOSAAF Central Committee, the republic's Red Half-Moon Society, directors of oblast and city departments of public education, and directors and instructors of sponsoring educational institutions.

In the preparatory period the civil defense staffs and schools and the organs of public and vocational-technical education provided methodological assistance to the educational institutions more actively. The proficiency of military instructors and teachers giving civil defense courses grew noticeably, and the training material base became stronger. The sponsoring schools and vocational-technical schools became the propagandists of advanced skills in civil defense instruction.

Secondary School No 162, Chilanzarskiy Rayon, Tashkent is an example of integrated solution of civil defense problems. Director Z. Azizkhanova frequently sits in on civil defense lessons, takes an interest in how well the students are doing in this subject and works to improve the methods of its instruction. She makes it absolutely sure that all second grade teachers and all fifth grade class leaders promptly take their training in civil defense courses, and she periodically brings up civil defense questions for discussion by the pedagogical council. On her initiative and with the support of the teachers, particularly military instructor V. Normatov, a civil defense office has been created in the school, and civil defense nooks have been set up in the junior classrooms. A training ground equipped with a fallout shelter is being set up with the assistance of sponsors.

High effectiveness is achieved in every lesson here owing to the efforts of the entire pedagogical collective. Civil defense lessons proceed at a good methodological level in the second and fifth grades.

Reinforcement of practical habits is promoted by regular exercises conducted in the third and fourth grades. This purpose is also served by testing in the GTO ["Ready for Labor and Defense of the USSR"] norms, particularly in the standards of the "Civil Defense" division, and by various forms of extracurricular work.

An inspection conducted during the preparatory period also revealed a number of significant shortcomings in the civil defense training afforded to young people in the republic. Thus a number of schools in Samarkandskaya and Bukharskaya oblasts fell clearly behind in the study of this subject. Lessons were conducted in the junior grades according to the old way: Rather than a complete period, only 15-20 minutes were devoted to them. Exercises in the use of collective and personal protective resources were not conducted at all. Adequate attention was not devoted to extracurricular civil defense work. Thus it is no wonder that during the Bukhara city finals of the "Zarnitsa" military-sports games conducted in those days, an attempt was made to reduce civil defense measures down to donning gas masks and responding to the flash of a nuclear burst; moreover this event was planned to occur in, of all things, the gymnasium. These oblasts were very slow in finding schools to sponsor civil defense functions.

It should be noted that the republic's Ministry of Education reacted efficiently to the reports coming in from local schools, and that it took effective steps to eliminate the shortcomings. Thus, acting on materials furnished by the Uzbek SSR Civil Defense Headquarters, the ministry's governing board convened to hear a report from the director of the Samarkandskaya Oblast Department of Public Education and it adopted an expanded decision which was then used as the basis of an order. The latter required sponsoring schools to be organized by the end of the current year in all of the oblast's cities and rayons, strict surveillance over the civil defense training given to instructors and students, activation of extracurricular work in this subject and improvement of the military-patriotic indoctrination of schoolchildren.

But let us return to the conference. It was opened by A. Khodzhayev, deputy chairman of Uzbek SSR Council of Ministers. The principal reports were given by Minister of Education S. Shermukhamedov, Minister of Higher and Secondary Special Education S. Pulatov and Uzbek SSR State Committee for Vocational and Education Chairman P. Kayumov. Much interest was shown in speeches given by Lieutenant General S. Akhundzhanov, the Uzbek SSR's civil defense chief of staff, by Lieutenant General M. Galiullin and Major General G. Strel'tsov, deputy troop commanders of the Turkistan Military District, Uzbek SSR Komsomol Central Committee Secretary U. Saydomatov and by executives of ministries having secondary educational institutions under their jurisdiction.

Much attention was devoted in the principal reports and messages to advanced skills in civil defense instruction and to development of high moral-political and psychological qualities in students. Komsomol Central Committee Secretary Yu. Saydomatov dwelled in detail in his speech on participation of the Komsomol organizations in civil defense functions. He named attendance of civil defense courses and the republic Komsomol school by active members as the main prerequisite of this problem's successful solution. The Komsomol organizations of the schools, vocational-technical schools and tekhnikum's, said Comrade Saydomatov, must ensure real Komsomol concern for protective structures, for the training of nonmilitary formations and for improving the civil defense training material base, and they must see that young students actively participate in all civil defense functions conducted in educational institutions.

The conference participants thoroughly discussed the methods of extracurricular work, the "Zarnitsa" and "Orlenok" military-sports games and testing in the practical civil defense standards of the GTO complex.

An important place was allotted in the reports and speeches to the training material base. Speakers described how this problem was being solved at the sponsoring educational institutions--secondary schools No 9 and No 64 and State All-Union Vocational-Technical School No 84 in Tashkent. These schools make effective use of technical training resources, and much has been done by the hands of the students under the guidance of their teachers. The offices, classrooms and training grounds are all intended for improvement of the practical training afforded to students in civil defense.

The conference participants attended open lessons and training sessions, they attended a review of and competitions between school and military formations, and they participated in functions contained within the school civil defense day program. Local civil defense staffs and courses helped to prepare the training material base in the schools and organized consultation sessions for instructors. As the conference participants noted, their constant and effective help had a positive effect, improving the performance of students in civil defense and promoting stronger discipline and improved indoctrination.

The conference adopted some recommendations. The Ministry of Education and the republic's State Committee for Vocational and Technical Education published orders on the basis of its results, and planned concrete measures for implementing these recommendations. A large group of active civil defense workers was awarded "Distinguished Worker of Public Education" and "Distinguished Worker of USSR Civil Defense" chest insignias, honorary certificates and valuable gifts. Valuable gifts--color television sets--were awarded to secondary schools No 9 and No 64 in Tashkent for exemplary organization and conduct of civil defense measures.

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CIVIL DEFENSE

RECONNAISSANCE OF DISASTER AREAS

Moscow VOYENNYYE ZNANIYA in Russian No 8, Aug 81 (signed to press 10 Jul 81) p 18, rear inside cover

[Article by Colonel V. Komarnitskiy: "In a Disaster Area"]

[Text] In order that civil defense forces could enter a disaster area within a city, the first thing to do would be to build a temporary access road, create passages through ruins and through contaminated areas and reinforce or raze buildings and structures in danger of collapse and hindering safe traffic and rescue operations.

First if there are no existing roads or if they cannot be used, a temporary access road is laid from the forming-up place to the disaster area, in which it is extended following the appropriate reconnaissance. When such a road is laid, passages through obstructions (ruins) and detours over obstacles are cleared and marked, sections of soft ground are reinforced and everything that could hinder the passage of people and equipment is cleared away.

It stands to reason that the way these jobs are organized and the procedures employed would depend on the planned route of traffic and the specific characteristics of its different sections. But in any case the basic technical requirements shown in the table below must be complied with.

Basic Indicators	For Wheeled Vehicles	For Tracked Vehicles	For Mixed Traffic
Traffic lane width (not less than), meters	3.5	4.5	8
Width of passages through ruins, meters	3.5	Turnouts every 150-200 meters	
Maximum grade, percent	10	20	10
Smallest turning radius, meters	25-30	25	25-30
Bridge capacity, tons	Up to 25	40-60	40-60

Obstructions form as a result of the destruction of buildings and above-ground structures in a disaster area, as well as on the main streets of population centers. Therefore temporary passageways must be cleared through them. Paths permitting unhindered access to civil defense forces arriving for rescue and emergency reconstruction operations must first be laid. As a rule they are laid in a radial orientation, and they connect together the regions in which emergency reconstruction must proceed. Approaches to the work areas are cleared from the main paths. Then the paths are prepared to permit maneuver of civil defense forces and evacuation of the public from the disaster area. For these purposes the paths cleared to provide access to the first forces are widened and joined together as necessary.

As a rule radial and lateral paths are created along wide streets, boulevards, and through squares and other places in which obstructions are less probable or insignificant. Obstructions should be detoured in all cases if this would reduce the time before civil defense forces could reach their places of work. But when an obstruction extends for several dozens meters and it is more than 0.6-0.8 meters high, it would be suitable to clear a passage directly over it. In this case large structures are removed from the surface of the obstruction (or broken down), and long metallic structures are pulled out or cut apart so that they would not hinder the movement of transport and special equipment.

A track or a continuous roadbed of boards, timbers, beams, and reinforced concrete and metallic planking can be used in some sections of the passage. Large blocks of ruble, girders, and simple trestles and frames are used as supports.

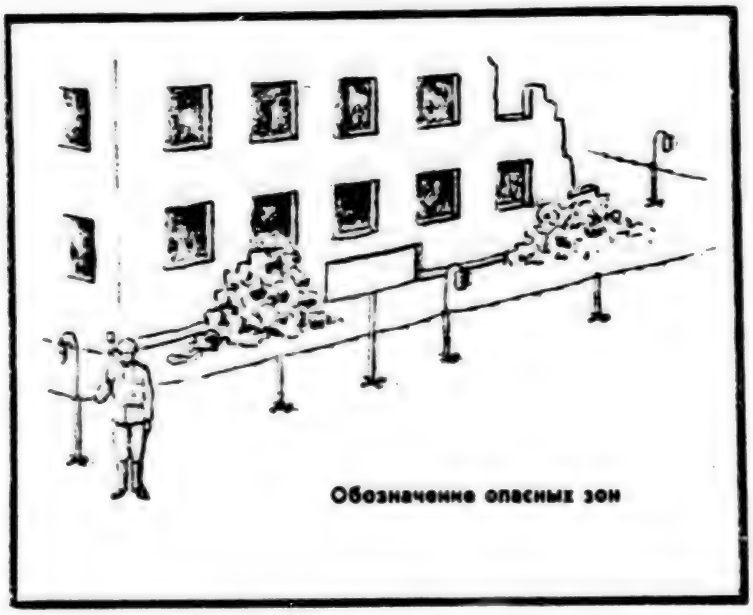
Freight handling machines, bulldozers, track layers, excavators, loaders and various small mechanized resources, winches, blocks, pulleys, jacks, pneumatic and motorized hammers, hand tools and other devices are extensively employed when clearing passages. Explosives are also effective. They reduce the passage clearing time considerably.

All temporary passages and the directions of movement in a disaster area must be labeled by the appropriate symbols. A traffic control service is organized to manage these paths.

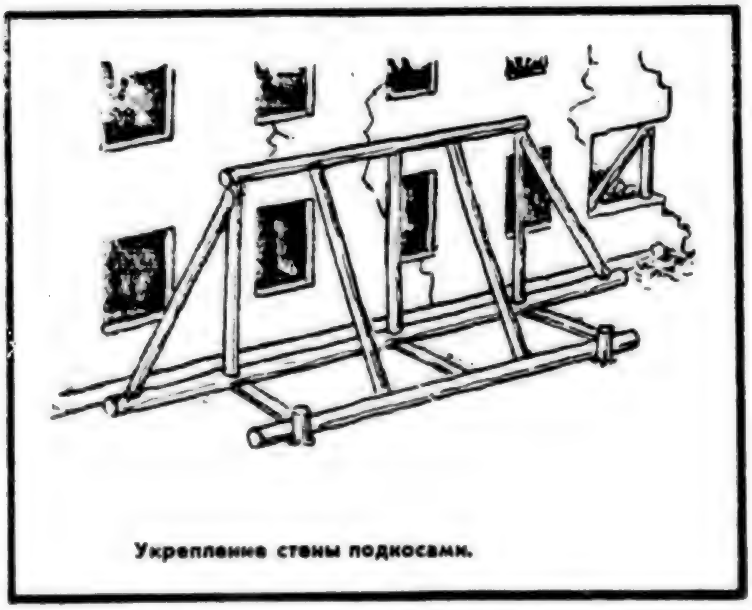
Unstable building structures threatening to collapse present a sizeable danger. Either they should be temporarily reinforced, or if this is impossible of unfeasible, they should be razed. A special inspection is conducted to clarify the nature of the damage. A hazard exists when a wall leans a distance equal to one-sixth of its thickness from vertical, when a structure hangs unstably, and when walls are cracked and tilted. A hazard also exists when there are a large number of vertical cracks in piers and columns (more than 1 mm wide and more than 30 cm long in the material of the structure itself). Walls next to collapsed ceiling-floors are extremely unstable as well. They must be reinforced. But first of all people should be evacuated from the danger zone, and these areas should be barricaded off. Only after this can the actual work begin, with all precautions being observed.

Structures may be razed by track layers, bulldozers, tractors, vehicles equipped with winches, winches alone, cables with length not less than twice the height of the structure to be razed, and small mechanized tools.

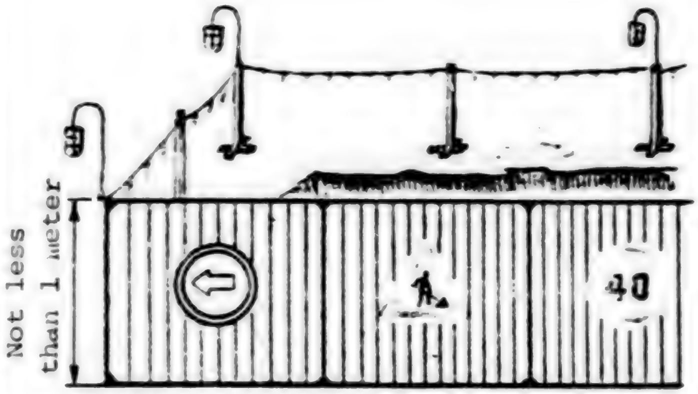
Permanent danger zones include territory around the entire perimeter of a building or structure to be razed. These zones are barricaded off and marked by signs visible from streets and passages, and guards are posted in especially dangerous places.



Marking Off Danger Zones


Укрепление стены подкосами.

Reinforcing Walls With Props

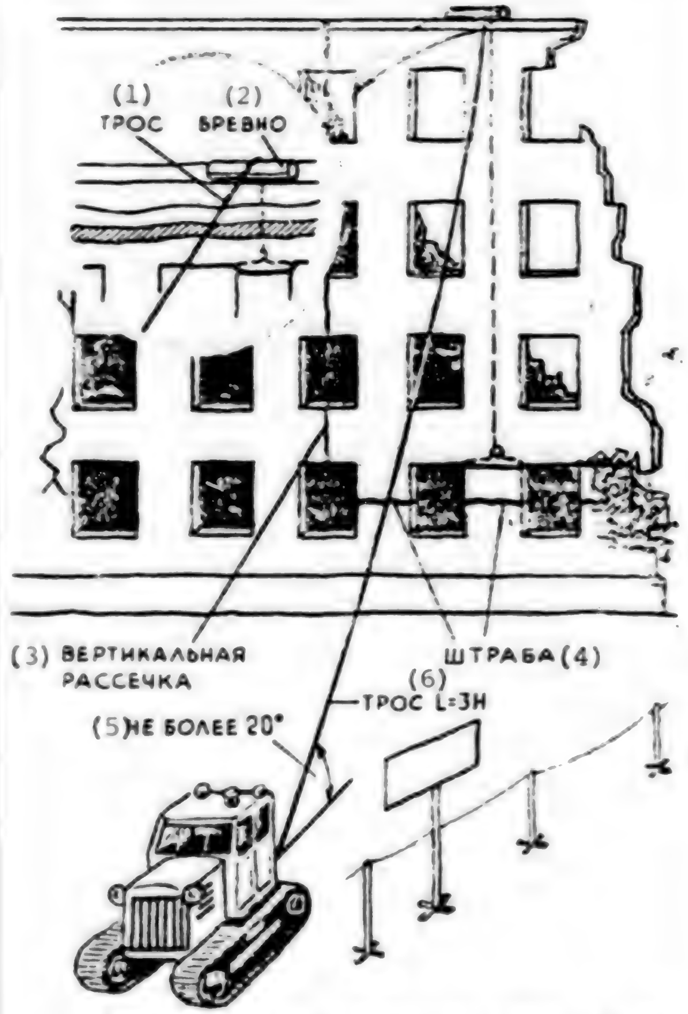


Небольшие опасные зоны (шурфы, траншеи) ограждают сплошными щитами, на которые подвешивают красные фонари, предупредительные надписи и необходимые дорожные знаки.

Small danger zones (pits, trenches) are barricaded off by a continuous fence of panels, on which lights, warning notices and the necessary road signs are hung.

Explosives can be used for the same purposes as when clearing passageways. If the situation allows, it would naturally be better to use the so-called quick method, in which the explosive charges are located in building basements. In this case the radius of the danger zone should be not less than 400 meters. When concentrated or small charges are used to raze building structures, the radius may be decreased by a factor of four. In any case, however, demolition experts must comply strictly with the precautions and with the safety rules.

Unstable structures may be strengthened with wooden or metallic props positioned 45-60° with respect to horizontal, when the height of structures and walls does not exceed 6 meters, or with double wooden or metallic props when wall height is up to 12 meters. Props should be set up against each pier of the wall and secured together by diagonal and transverse ties--boards or other materials. Bracing wire is secured between a damaged wall and a surviving wall of an adjacent building. To relieve the load on bearing elements of floors (girders), columns and partitions, temporary struts, cleat-prop systems or trestle supports can be used. Destroyed or severely damaged posts are substituted by wooden supports. When cracks are present in posts, load-relieving struts are set up next to them, and when cracks form in partitions the struts are set up in window openings. In multistory buildings struts are also set up in the two stories above the damage. Naturally, it would be expedient to use surviving elements of damaged buildings and structures as strengthening materials: wooden and metallic beams, reinforced concrete beams and slabs, timbers and boards.

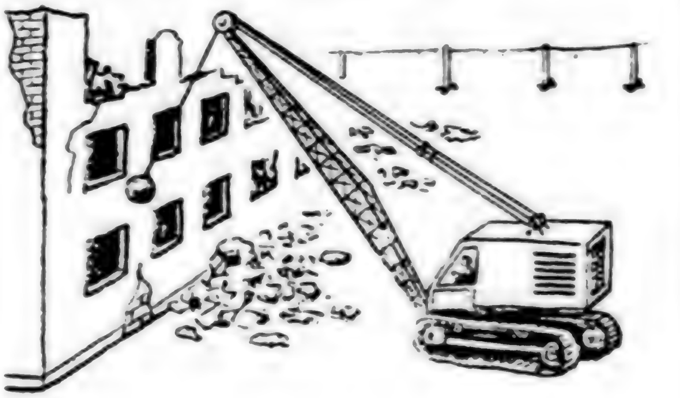


Поврежденные стены высотой не более 2 м обрушают ножом бульдозера внутрь здания. Нависшие стены обрушают с помощью трактора (тягача) и троса, зачаленного за уцелевшую часть стены или оконный простенок.

Damaged walls not more than 2 meters high are razed with a bulldozer blade directed inward into the building. The tallest walls are razed with a tractor and a cable fastened to the surviving part of the wall or to a window opening.

Key:

1. Cable
2. Log
3. Vertical cut
4. Toothing
5. Not more than 20°
6. Cable, $L = 3H$



Разрушение стен здания шар-бабой — эффективный способ обрушения поврежденных конструкций.

Razing the wall of a building with a ramming ball--an effective way for bringing down damaged structures

Structures threatening to collapse can also be secured by a combined method. But each time we must select the most sensible method on the basis of the situation and the possibilities available to the formations doing this work.

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LECTURE ON ALERTNESS

Moscow VOYENNYYE ZNANIYA in Russian No 2, Feb 82 (signed to press 7 Jan 82) p 24

[Article by Senior Lieutenant V. Drovosekov: "To Be Alert"]

[Text] There is special meaning to these words of the military oath: "...I solemnly vow to be...an alert soldier...." Entering the ranks of the USSR Armed Forces, the young private and the young seaman give their word to protect military and state secrets at all costs and under all circumstances and to decisively foil all attempts by imperialists and their accomplices to weaken the combat readiness of the army and navy, to split the strong moral-political unity of the Soviet soldiers and Soviet people and their close union about the Communist Party. Vowing to be alert, the soldier solemnly promises to remain faithful to the Soviet motherland to his last breath.

Lenin's commandments are the foundation of high and constant political and military alertness. V. I. Lenin taught the party, people and armed forces to keep a watchful eye on all intrigues of the bourgeoisie. Speaking at the Ninth All-Russian Congress of the Soviets, Vladimir Il'ich instructed: "...the first commandment of our policy, the first lesson...that all workers and peasants must assimilate is to be on guard, to remember that we are surrounded by people, classes and governments openly expressing the greatest hatred toward us. We must remember that we are always a hairbreadth away from invasion."

This directive is an immutable law to Soviet soldiers. Firmly understanding and observing it, they defended socialism in battle with White Guards and foreign interventionists, they stood as a wall in the path of the aggressive intrigues of imperialists in the years of peaceful construction, and they destroyed the fascist horde down to the last man in the Great Patriotic War.

Today, in a time when imperialist aggressors are spurring the arms race under the cover of the smoke screen created by the false proclamation of a "Soviet military threat," the requirement of being alert is more important than ever before. Alertness is a constant and continually acting weapon of the Soviet soldier. Holding his oath sacred and inviolable, and firmly knowing and faultlessly performing his duties, the Soviet soldier will not be caught unawares. He is capable of recognizing and disarming the enemy at any moment, no matter how he cloaks himself and how insidious his tactics are.

Our adversaries are constantly expanding the front of their secret, subversive and overt diversionary ideological activity against the Soviet Union and against its armed forces. A sum total of 40 foreign radio stations are broadcasting hostile propaganda against the USSR in 27 languages of the peoples of the Soviet Union. The arsenal of resources for collecting military and state secrets is broadening and improving. Thus according to the foreign press long-range cameras can pick up objects 3-6 meters in size from an altitude of up to 500 kilometers.

The possibilities of electronic reconnaissance have increased significantly. Tens of thousands of specialists in radio, telephone and telegraph communication and other experts have been concentrated in the Pentagon's intelligence service. There are thousands of radio listening posts surrounding the USSR. As the foreign press reports, they are capable of even picking up short-wave radio conversations.

Going still further, Western intelligence services are trying to establish direct contact with Soviet servicemen and to extract top secret information from them. They send agents into the USSR disguised as tourists, diplomats and members of various delegations, and they time their visits to foreign ports to coincide with friendly visits by our warships.

All of these hostile intrigues are opposed by the high alertness of Soviet soldiers and of all Soviet people. Our party teaches us to be alert. The lessons of the past, and the memory of those who died for the motherland, teach us to be alert.

What does it mean to be alert? First of all it means the ability to recognize the insidious designs and actions of the enemy. The latter may approach an individual as a friend, ready to listen, sympathize and to offer gifts. He is especially interested in people with loose tongues, to whom we aptly refer in the vernacular as windfalls for the spies. This is why we must display alertness both in our correspondence and in what we say outside the walls of our units. Don't tell friends anything the enemy shouldn't know.

Alertness means unlimited devotion to the Communist Party and the Soviet motherland, consciousness, ideological steadfastness and immunity to bourgeois propaganda. Soviet soldiers remember this always.

Alertness also presupposes constant internal self-control, the soldier's readiness to perform missions in defense of the motherland and his capability for maintaining high combat qualities--steadfastness, courage and the will to win--in both ordinary and critical situations. This is manifested with special force in the actions of soldiers on sea cruises, soldiers providing international assistance to the people of democratic Afghanistan, and soldiers dependably protecting the USSR's borders around the clock.

Alertness is needed everywhere, and especially when serving combat duty, when on patrol and on watch, and when serving on the daily duty detail. It is by this that constant high combat readiness is guaranteed.

While serving on a detail, warrant officer K. Nekhvedovich noticed that two strangers were attempting to penetrate into the unit's territory. Acting competently, decisively and quickly, the warrant officer apprehended the intruders.

The latter tried to persuade the warrant officer to let them go, offering him a large sum of money. But Nekhvedovich would not make a deal.

Guards Private A. Andreyev was serving on patrol at one of the stations of the Moscow Underground. A person in an officer's uniform passed by without saluting, giving the appearance that he had not noticed the patrol. Andreyev made this known to the patrol chief, who called the stranger over and demanded his documents. The latter refused, giving the excuse that he was not carrying them. The patrol chief asked him to come along to the station to be identified. On the way the stranger tried to escape. But Andreyev caught up to and apprenhended the stranger. It was found out later that this was a criminal wanted by internal affairs organs, disguised as an officer.

The CPSU and the Soviet government are doing everything they can to strengthen the defense capabilities of the motherland and its armed forces. Soviet soldiers are called upon to alertly and dependably protect the sacred borders of the fatherland and the achievements of socialism, and to be ready to honorably perform their patriotic and international duty. Almost four decades have passed since the world-historic victory over fascist Germany. Mankind has become persuaded of the viability and inviolability of the world's first socialist state. Our people know what war means. This is why we emphasize alertness so much. This is what the great Lenin taught us.

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DOSAAF AND MILITARY COMMISSARIATS

PRE-DRAFT MILITARY TRAINING: THE AK RIFLE

Moscow VOYENNYYE ZNANIYA in Russian No 2, Feb 82 (signed to press 7 Jan 82) pp 25,33

[Article by Colonel K. Kolpakov: "How to Teach Weapons (Advice on Teaching Methods)"]

[Text] If a soldier knows his weapon well, he would doubtlessly be able to use it competently in combat, and keep it in constant combat readiness.

The workings of the Kalashnikov automatic rifle (AK) are studied in a classroom by students formed into study groups. The knowledge obtained is then reinforced and improved in fire exercises, which are conducted at specially organized training places for squads (or groups) under the guidance of a commander or a trained instructor--an assistant to the military instructor; this knowledge is also reinforced at firing ranges, during care for the automatic rifle and in other lessons associated with its maintenance.

The order in which the workings of the automatic rifle are studied is given in the basic military training program and in the basic military training textbook as well as in the infantry manual. Let us briefly recall it: purpose, combat properties and general layout; disassembly and assembly; purpose and layout of parts and mechanisms; cartridge layout; automatic rifle accessories; operation of parts and mechanisms, misfires and methods of eliminating them; care of the weapon, its storage and preservation; inspection of the weapon and its preparation for fire.

Another order is possible as well. For example, after disassembling and assembling the automatic rifle students acquaint themselves with cleaning and lubrication and with the rules of care and preservation. It is important for all future soldiers to know the workings of the AK and of hand grenades, to the full extent required by the manual. Military instructors must remember that the main emphasis should be laid on hands-on training with the weapon, so that the students could develop firm habits of its disassembly and assembly, cleaning and lubrication, inspection in assembled and disassembled form and preparation for fire.

It is only in this way that we can ensure safety when firing the weapon, that students would be able to shoot accurately, and that in the event of misfires they could quickly determine their causes and competently eliminate them; in this way we inspire a love for one's weapon, seen as a dependable means of protecting the motherland, in preconscript and conscript youth. Moreover we should do everything we can to make the students themselves want to acquire an excellent knowledge of the automatic rifle and maintain a careful attitude toward it. Mandatorily using concrete examples, we should describe the constant concern of the Communist Party and the Soviet government for developing and improving the Soviet Army's armament.

Every fire training lesson would best be started with a short review of previous material, which should introduce the students to the new material in a natural manner. The review can be conducted as a discussion, in which the military instructor can clarify how well the students have learned the previous material, or it may take the form of an exercise, in which the students demonstrate practical actions with the weapon--for example they may disassemble and assemble the automatic rifle, and so on.

The principal instruction methods used on new material associated with the workings of an automatic rifle are demonstration coupled with explanation and training (exercises). Training models are used to study the weapon. In addition we can use posters, diagrams, film strips, slides and projectors for the latter (slide projectors, overhead viewers, film viewers and others).

Here is some advice on teaching methods that I believe would be of assistance to military instructors.

Beginning disassembly of the automatic rifle, the instructor should first explain why an automatic rifle is disassembled and present the basic rules of its disassembly. Following this a clear and fast demonstration of the weapon's disassembly and assembly is provided. From here on, the training proceeds as follows. First the leader discusses the basic steps in the order of disassembly. For example, discussing the step "Remove the magazine" he shows and explains what to do to separate the magazine from the weapon, and where and how it is set aside. It should be emphasized especially that all parts of an AK are stored in the order of their separation from the weapon. This makes it easier to determine the order of reattaching each part during the automatic rifle's assembly. During disassembly the military instructor turns attention to the correct position of the hands and the weapon.

After studying disassembly the military instructor asks questions. The procedures for assembling the automatic rifle are learned in the precisely identical manner. In conclusion the students disassemble and assemble an AK as a group, in which case one of the students is appointed to disassemble (assemble) the automatic rifle while the rest (their number being equal to the number of training rifles available) repeat his actions. During disassembly (assembly) the military instructor can stop the student demonstrating the procedures and appoint another to continue the demonstration.

The habits of disassembling and assembling an automatic rifle are improved during the time of its cleaning, during the performance of standards, when preparing for fire and when practicing the methods of correcting misfires.

The layout of the parts and mechanisms of an automatic rifle is usually studied in the sequence indicated in the basic military training textbook. The military instructor must try to see that the students could visualize the way the parts of the AK interact (this prepares the students for studying the work of the parts and the mechanisms). For example, explaining the purpose of the piston extension, the military instructor attaches the breech-block to it and demonstrates how the former places the breech-block and parts of the trigger mechanism into action.

In addition to this the military instructor must teach the future soldiers to study the material in a certain sequence. For example, acquainting a student with the breech, first the instructor should indicate its purpose, after which he should begin describing its layout with the anterior part, and then proceed from its external layout to its inner workings.

During the explanation the students take the appropriate part (mechanism) in their hands or place it in front of them, they attentively listen to the military instructor, and they watch his demonstrations.

The discussion method can also help students learn the purpose of the units and mechanisms of the automatic rifle. As an example when studying the breech-block, the military instructor can pose the following problem to the students after removing the breech cover from the automatic rifle and attaching a magazine with training rounds to it. "Look at this, and tell me what the function of the breech-block is."

Meanwhile he slowly demonstrates how a cartridge is fed into the chamber, how the bore is closed and locked, how the firing pin strikes the cartridge primer and how the empty cartridge is extracted from the chamber.

By questioning several of the students the military instructor determines whether or not they understood the purpose of the breech-block, following which he goes on to its layout. He indicates that the breech-block consists of a frame, a firing pin, an extractor with a spring and axle, and a pin. The military instructor dismantles the automatic rifle and asks the students to do the same, and then he picks up each of the parts he calls out and explains their layout.

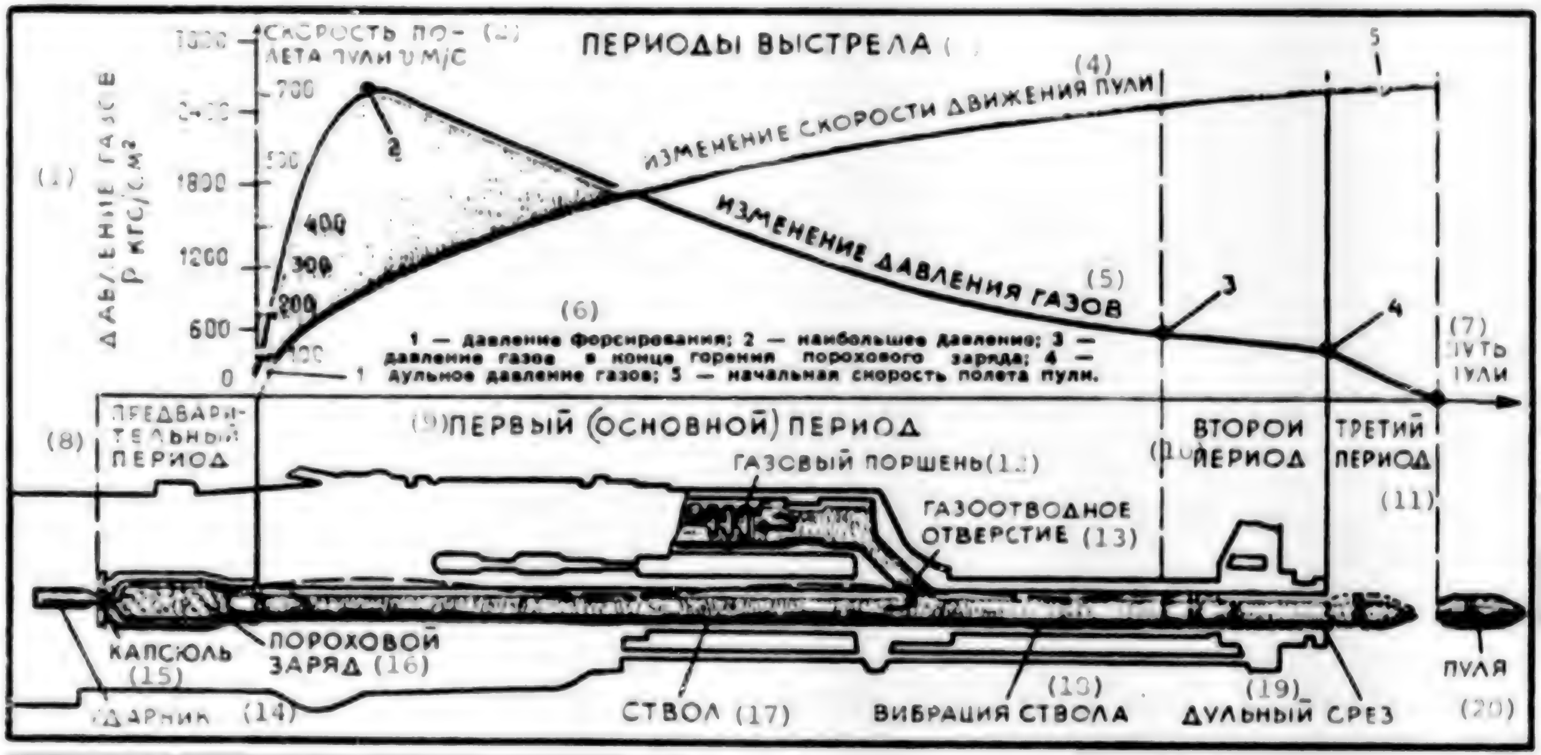
Ending his analysis of the purpose and layout of the breech-block, the military instructor determines whether or not the students have any questions and if anything is still unclear to them, he explains things to those who failed to understand something, and he calls upon several persons to verify how well the material was assimilated.

The purpose and layout of the rest of the parts and mechanisms of the automatic rifle are studied in the exact same sequence.

The Discharge Phenomenon

Ejection of a bullet from the bore of a weapon by the action of powder gases is called a discharge.

The firing mixture of the cartridge primer explodes when the firing pin strikes the cartridge primer. The resulting flame passes through the primer port to the powder charge and ignites it.


ПЕРИОДЫ ВЫСТРЕЛА
(1)
ДАВЛЕНИЕ ГАЗОВ
P КГС/СМ²
СКОРОСТЬ ПОЛЕТА ПУЛИ V M/C (2)
0
600
1200
1800
2400
3000
100
200
300
400
500
700
(4)
ИЗМЕНЕНИЕ СКОРОСТИ ДВИЖЕНИЯ ПУЛИ
(5)
ИЗМЕНЕНИЕ ДАВЛЕНИЯ ГАЗОВ
(6)
1 — давление форсирования; 2 — наибольшее давление; 3 — давление газов в конце горения порохового заряда; 4 — дульное давление газов; 5 — начальная скорость полета пули.
1
2
3
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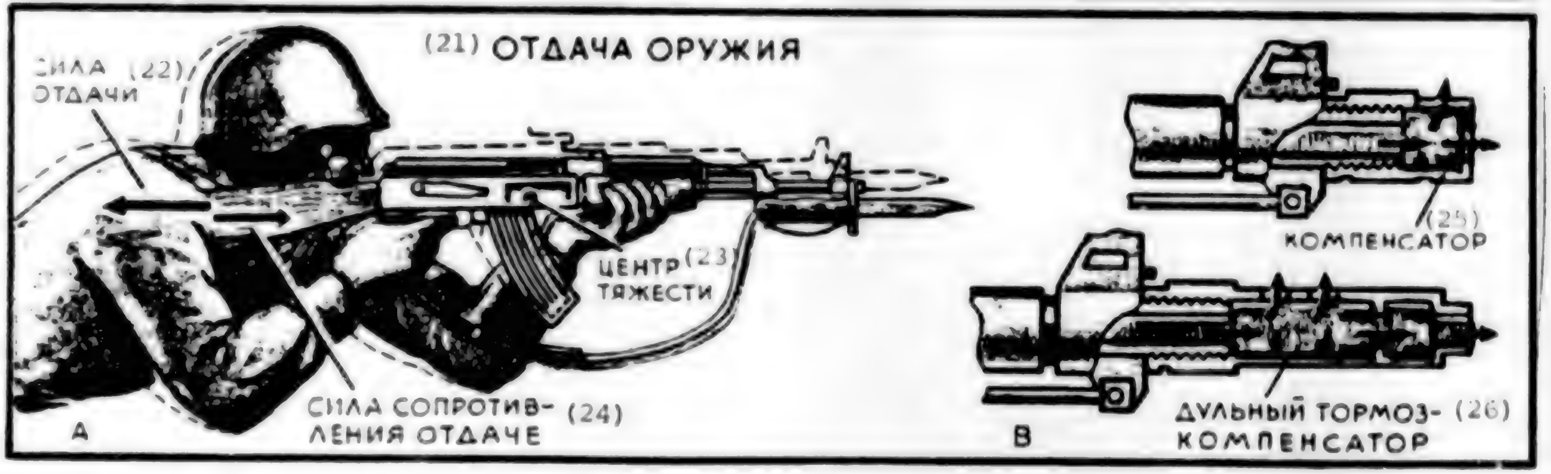
5
(7) ПУТЬ ПУЛИ
(8) ПРЕДВАРИТЕЛЬНЫЙ ПЕРИОД
(9) ПЕРВЫЙ (ОСНОВНОЙ) ПЕРИОД
(10) ВТОРОЙ ПЕРИОД
ТРЕТИЙ ПЕРИОД (11)
ГАЗОВЫЙ ПОРШЕНЬ (12)
ГАЗООТВОДНОЕ ОТВЕРСТИЕ (13)
УДАРНИК (14)
КАПСЮЛЬ (15)
ПОРОХОВОЙ ЗАРЯД (16)
СТВОЛ (17)
(18) ВИБРАЦИЯ СТВОЛА
(19) ДУЛЬНЫЙ СРЕЗ
ПУЛЯ (20)



[Key on following page]

Key:

1. Gas pressure P, kg/cm^2
2. Bullet velocity v, m/sec
3. Discharge periods
4. Change in bullet velocity
5. Change in gas pressure
6. 1--shot start pressure; 2--maximum pressure; 3--gas pressure upon completion of powder charge combustion; 4--muzzle gas pressure; 5--initial bullet velocity
7. Path of bullet
8. Preliminary period
9. First (main) period
10. Second period
11. Third period
12. Gas piston
13. Gas port
14. Firing pin
15. Cartridge primer
16. Powder charge
17. Barrel
18. Barrel vibration
19. Muzzle
20. Bullet
21. Weapon recoil
22. Force of recoil
23. Force resisting recoil
24. Center of gravity
25. Compensator
26. Muzzle brake-compensator

As the powder charge burns, a large quantity of intensely heated (up to 3,000°C) gases forms, creating high pressure in the bore (up to 3,000 kg/cm^2).

As a result of gas pressure exerted upon the base of the bullet, the latter moves from its place and rotates along the bore in conformation with the rifling. It advances through the bore at continually increasing velocity and is ejected along the axis of the bore.

Gas pressure exerted upon the base of the cartridge case causes the weapon to move backward. This is known as recoil.

In response to pressure from powder gases upon the walls of the cartridge case, the latter presses firmly against the chamber and keeps the gas from escaping in the direction of the breech-block. Simultaneously, with the discharge, the barrel experiences oscillatory motion (vibration) and heating.

Powder gases escaping from the bore after the bullet produce a flame and a shock wave on coming in contact with the outside air. This is the source of the sound of a discharge. In some models of automatic weapons (for example the Kalashnikov automatic rifle, the RPK, the PK etc.) part of the powder gases formed at the time of the discharge are drawn off through a port in the barrel and utilized for reloading.

The velocity a bullet attains as it leaves the bore (the muzzle) is called the initial velocity (v_0).

Weapon Recoil

The force of recoil acts along the axis of the bore, while the shoulder support and the center of gravity of the weapon are located below the axis of this force. This is why the muzzle of the weapon rises upward when fired.

The influence of recoil can be decreased and firing results can be improved by holding the weapon properly and consistently.

Some weapon models (heavy machineguns, the Kalashnikov automatic rifle) have muzzle brakes, muzzle brake-compensators or compensators with compensating ports. Powder gases escaping through these ports create an excess pressure which deflects the weapon's muzzle in a direction opposite to the location of the ports. Striking the front walls of the chamber, part of the powder gases reduce recoil.

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DOSAAF AND MILITARY COMMISSARIATS

PRE-DRAFT MILITARY TRAINING: THE SELF-PROPELLED HOWITZER

Moscow VOYENNYYE ZNANIYA in Russian No 2, Feb 82 (signed to press 7 Jan 82) pp 28-29, rear cover

[Article by Engineer-Colonel V. Knyaz'kov]

[Text] Were one to place a tank side by side with a self-propelled gun, the uninformed individual might not be able to distinguish between them. The external, most obvious features of these combat vehicles are in fact consistent: an armored body of characteristic shape, a gun and caterpillar tracks.

Sometimes we might even hear someone exclaim at a military parade:

"The tanks are coming!"

Then we find out that the vehicles moving in parade formation are self-propelled guns, powerful and menacing. They are capable of destroying the enemy's nuclear weapons, his artillery at gun emplacements and in concentration areas, tanks and manpower, control posts, electronic resources, defensive structures and so on.

But why are they called self-propelled and armored? Does this mean that they "go" by themselves and that they are "clothed" in armor? Quite correct. The explanation for this combination can be found in the features of modern combined-arms combat, which is saturated with diverse fire weapons and armored resources, combat that is highly dynamic, characterized by aggressive and decisive actions by the troops.

Let us look at the 122-mm self-propelled howitzer as an example. Use of such artillery pieces is precisely what ensures the closest fire organization between artillery on one hand and motorized infantry and tank units and subunits on the other. By their presence we can also achieve direct fire support to troops in battle.

The conventional howitzer, which does possess many positive combat qualities, has its shortcomings as well: It is classified as a towed artillery piece. Whenever a fire position must be changed, a prime mover must be summoned. At the new fire position the howitzer must be unhitched, the prime mover must be concealed in the closest natural shelter, and then the weapon can be placed into battle. But before that, the crew must take shovels and dig a pit for the howitzer, a shelter for the personnel and trenches for the ammunition.

How, then, does a self-propelled howitzer operate? It can move right with the combat formations of tank and motorized infantry subunits. Since it "goes by itself," it does not need a prime mover. Its powerful propulsion system easily carries the 16-ton combat vehicle. What happens if a target appears? Once the howitzer stops moving, for practical purposes we can say that it is in its fire position and ready to fire. At any moment it can open direct fire on the enemy's mechanized resources, or with accurate fire it can punch holes through minefields and various obstacles.

The 122-mm howitzer mounted in the turret port is capable of striking manpower, fire weapons and other targets up to 15 km away. Fire is maintained in this case in the conventional manner, from a covered position, and the design of the self-propelled howitzer is adapted for this. The barrel can move vertically within the turret from -3° to +70°. The turret itself can rotate a full 360° horizontally.

Now imagine the following combat situation. A battery of self-propelled howitzers is on the march when the commander receives orders to open fire against a particular target. The latter's coordinates are immediately transmitted by radio. How long would it be before the battery could open fire against the enemy? This is far from an idle question. As far as preparing the basic fire data is concerned, there are no delays to be expected. The commander can quickly calculate them. Nor will selection and occupation of the fire position take much time. Recall, as we mentioned earlier, that wherever the gun stops, there is its fire position.

But how quickly would the crew be able to shift the howitzer from travel to combat position? After all, this is one of the decisive stages. To answer simply, Soviet specialists thought out the design of the vehicle well, and they took account of its operating features. They created good conveniences for the crew's actions.

As soon as the command to prepare for fire is sounded, acting competently and in coordinated fashion, the commander, gunlayer, loader and driver-mechanic are always able to satisfy the stiff combat standards. Before the second hand barely finishes two revolutions on the dial, we would hear the report that the gun is ready. Just 120 seconds, and the menacing combat vehicle is ready to shower the indicated target with heavy howitzer shells.

Obviously this would be a pertinent place to bring up the rate of fire of a self-propelled howitzer. Discussing this characteristic, we must keep several factors in mind. First of all the actions of the commander, gunlayer and loader during the discharge, and secondly the conditions under which these actions are performed.

Let us imagine opening the hatch, descending into the fighting compartment with a stopwatch and watching the actions of the crew.

The artillery command culminates with the vigorous order "Fire!". On hearing it, we press the button of the stopwatch. It is in response to this signal that the gun is aimed, loaded and discharged.

The commander takes a reading off the gun position indicator and reports it to the gunlayer. The latter sets this reading on his sights, turns on an electric drive and quickly turns the turret, after which he uses a manual drive to precisely aim the howitzer on the target horizontally. With no delay he sets his sight, and using a lifting mechanism he aims the gun vertically: He raises the barrel until the bubble on the level is centered. Meanwhile the loader does not sit around with his hands in his pockets. He opens the breech mechanism by pressing forcefully on its handle. Turning around, he takes a projectile from the shell rack (consider that it weighs more than 20 kg!), installs the fuse, and drives the projectile into the bore with the help of a ramming mechanism. Then, turning around again, he takes a shell case, inserts the charge, places the shell case in the breech chamber, and closes the breech mechanism--a vertically oriented wedge rises upward and dependably locks the bore.

In response to a signal from the commander the gunlayer presses the trigger. Let us stop our stopwatch and read the dial at the moment of the discharge, when the spent shell case is ejected and a semiautomatic mechanism opens the breech mechanism for the next round. The second hand should not have traveled more than 12 divisions. Not more! Such is the unrelenting law of the combat standard.

Actually the official rate of sighting fire of a self-propelled howitzer is up to five rounds per minute. Is this a lot or a little? I am sure that the reader has already persuaded himself that this is a rather high figure. It took more time than that to just list the responsibilities of the crew as it fired the weapon. As an experiment, read these responsibilities aloud, beginning with the words "The commander takes a reading off the gun position indicator..." and ending with the phrase "...the gunlayer presses the trigger." See how much time that takes. Sixty seconds, rounded off. But within this short time interval a self-propelled howitzer is capable of five aimed shots!

Hence it becomes clear how competently and closely the crew must work to achieve the official rate of fire, remembering in this case that in the apportioned space, or more accurately in the fighting compartment, there is barely enough room to turn around.

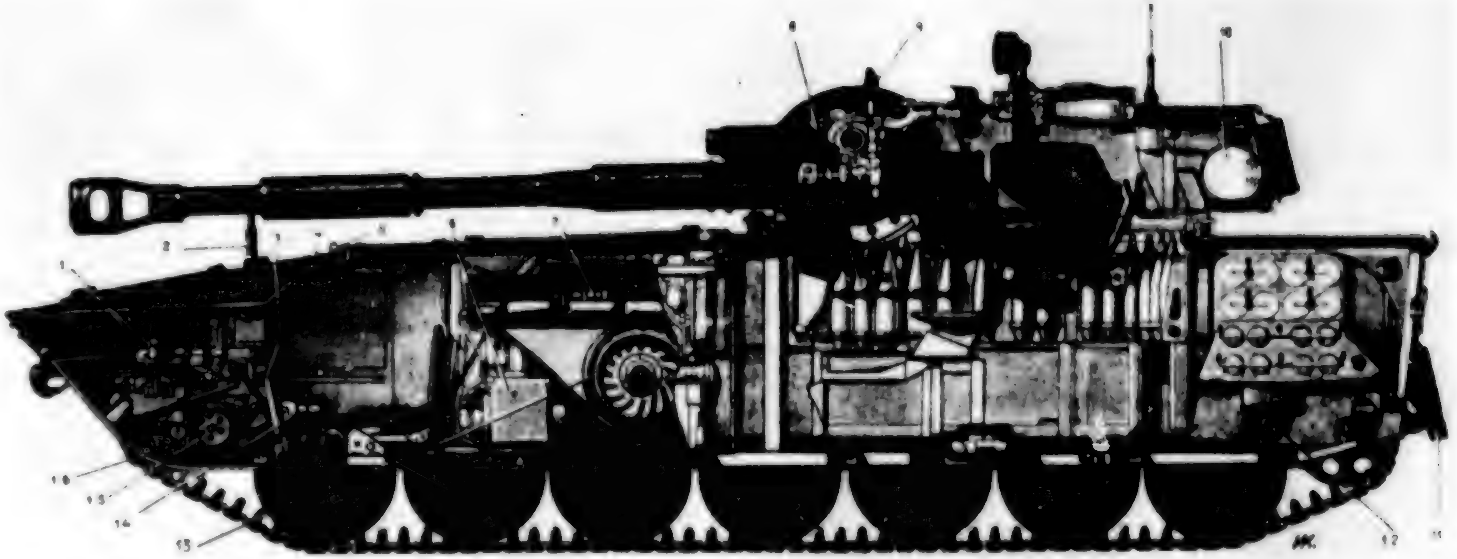
Now let us turn to the tactical-technical characteristics of the howitzer which, in sum total, determine its maneuverability. Similarly as with a tank, the combat quality of maneuverability is a complex concept in relation to this model of armament. Its components are mobility, passibility and turning radius.

First, about mobility. Upon what does it depend, and what determines it? First of all there is the engine--the "heart" of the combat vehicle. The propulsion unit and the running gear allow the howitzer to move over dirt roads at 30 km/hr. But this is not the limit. The combat vehicle's running gear is designed in such a way (designers used caterpillar tracks with rubber-metal joints) that it may reach speeds of 60 kilometers per hour and more on a highway. Now that is high speed!

Moreover its range is considerable. Were we to fill the combat vehicle's tanks with fuel right up to the fuel cap (a total of 350 liters), the howitzer would be able to travel up to 500 km without refueling.

There is one more highly valuable combat quality that significantly supplements the maneuverability of a self-propelled howitzer. It can "fly." Well, not in the literal sense, of course, but figuratively. The fact is that the vehicle's overall

122-mm Self-Propelled Howitzer. Front View



122-mm Self-Propelled Howitzer

1--pneumatic system; 2--gun system stop in travel position; 3--rotating mechanism, clutch and brake control; 4--final drive control; 5--viewing instruments; 6--engine heating system; 7--engine and final drive oil system; 8--ammunition rack; 9--measuring instrument mount; 10--filtered-ventilation unit; 11--hydraulic equipment; 12--hydraulic shock absorber; 13--cooling system housing; 14--intermediate reduction gear; 15--final drive; 16--driving sprocket dimensions are relatively small, and according to today's yardsticks it is not all that heavy (remember, just 16 tons); add to this the possibility for reducing its clearance (the designers equipped the vehicle in such a way that it could "squat down" a little), which doubtlessly makes it much easier to transport it by air. In other words, as specialists sometimes express it, the combat vehicle is airliftable.

The self-propelled howitzer not only "propels itself," but it also swims. Now this is in the literal sense. The vehicle has a watertight body, and it is able to float over water obstacles. It does not require any special devices for this, for example a propeller shaft, a screw propeller or the like. It uses the same caterpillar propulsion system that it uses on land. Each link of the caterpillar track plays the role of a miniature paddle. The tracks spin through the water, and owing to this the vehicle can reach a speed of 4.5 km/hr over the water surface.

Imagine for a minute that a water obstacle half a kilometer wide is before us. The reader would have to agree that this is quite a substantial obstacle. However, because it has the combat qualities discussed above, the self-propelled howitzer can take it on without delay, and in 7 minutes--under ideal conditions of course--it can reach the opposite bank. And it is practically ready for fire at any moment.

Describing the self-propelled howitzer's ability to float over water obstacles, we have carried the discussion over to another quality of the combat vehicle--passibility. Here as well, the corresponding indicators are rather high. Take as an example its unit pressure on the road. It is just 0.5 kg/cm^2. And this is extremely important, especially when conducting combat operations in various geographic zones. Desert sands, marshes and snowfields are no obstacles to this combat vehicle. And it even feels confident in mountainous terrain. The armored vehicle is capable of going up and coming down grades of up to 35°, and surmounting other natural and manmade obstacles.

Talking about turning radius, we should keep in mind that the self-propelled howitzer has a caterpillar propulsion system. This means that in relation to this indicator it can be compared with a tank. Or more accurately, it is not inferior to a tank: It maneuvers well on the battlefield, even being capable of turning in place. This has inestimable significance to actions in mountains, population centers and forests.

Modern communication and observation resources with which the vehicle is outfitted permit its use on the battlefield at any time of the day--both day and night.

In short, the 122-mm caliber self-propelled howitzer possesses improved combat capabilities and good operational qualities, making it a modern and highly effective weapon.

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NEED FOR IMPROVED IDEOLOGICAL, PATRIOTIC WORK WITH YOUTH STATED

Moscow VOYENNYYE ZNANIYA in Russian No 4, Apr 81 (signed to press 9 Mar 81) pp 24-25

[Article by Colonel General Yuriy Andreyevich Naumenko, deputy commander-in-chief of Ground Forces for Non-Combat Training: "Towards a New Stage"]

[Text] The 26th CPSU Congress pointed out the necessity of further strengthening the defensive might of our homeland, and of educating the Soviet people in the spirit of high vigilance and constant readiness to protect the great achievements of socialism. In connection with this, work for increasing the effectiveness of initial military training and the military-patriotic indoctrination of youth acquires special importance.

It is known what great importance V. I. Lenin gave to the military training of workers. "Neither in peace nor war time," wrote Vladimir Il'ich, "should one forget about the science of gunnery or increasing the masses' familiarity with the military science alphabet." In modern conditions youth are mastering the "military science alphabet"--NVP [Initial Military Training]--in schools, technical schools, engineering trades schools and at training points.

The viability and necessity of initial military training are evident. It facilitates improvement of the entire system of indoctrination training work and increases student discipline and organization. This is why the task is being set down now to raise its level to a new stage in order that future soldiers will better master the theses of Leninist teachings, the USSR Constitution and CPSU decisions concerning protection of the socialist motherland; and that they will acquire the necessary knowledge and practical skills so that after conscription into active military service, they will be able to master modern weapons and combat equipment perfectly in a short period of time.

It must be said at once that it is possible to properly obtain high results in this important science only through common efforts, when military commissariats, organs of national and engineering trades education, Komsomol and DOSAAF committees, civil defense headquarters, and leaders of enterprises and institutions work together hand in hand relying upon the active support of local party and soviet organs.

Military commissariats are called upon to unite the efforts of all interested organizations. Available positive experience shows that the main thing in directing initial military training of youth is profoundly considered planning; the constant perfection of the systematic skill of military instructors, teachers, and training point chiefs and instructors; systematic control of the pace of exercises; the study and introduction of progressive experience to the practice of training and indoctrination and a timely summing up; and a continuous perfecting of material training resources.

A system for increasing and perfecting the systematic skill of military instructors, teachers and training point instructors must be accurately determined. It includes established and systematic training assemblies, courses, seminars, systematic monthly exercises and participation in objective commissions and independent work. It is important that all these actions are correctly planned and bestow not only a sum of special knowledge, but also equip them with the skill to properly conduct the training and indoctrination of youth. Special attention is paid to monthly one-day exercises where themes which military instructors will study immediately with their pupils are worked out in practice.

The work of the systematic councils created under the military commissariats is a significant reserve for increasing the pedagogical skill of military instructors. They must be comprised of workers from the interested ministries, departments and their organs on the jobs; the better military methodology instructors; and also, as far as possible, officers of military units and military training schools.

The training of teachers in initial military and physical instruction is carried out in several of the country's pedagogical institutes. However, a number of VUZ's (Lipetskiy, Kazanskiy and Azerbaydzhanskiy Pedagogical Institutes) do not devote the proper attention to forming the necessary material training resources, the purposeful work is not conducted in the selection of candidates for matriculation. The rectors of institutes, military commissariats and the organs of national education must pay steadfast attention to these problems.

Directors of training institutions, as a rule, and experienced tutors who have behind them many years of pedagogical service are obligated to assist the beginning military instructors. However, there are still directors who do not care seriously about the material training resources of initial military training or about the systematic training of military instructors; they do not attend their exercises; they do not organize independent work; and sometimes they do not even review and confirm the plans. These comrades seem to have forgotten that all-round training of youth for service in the armed forces is an important national task, that all military-patriotic work in the school depends to a large degree on the military instructor.

In this connection, I would like to point out that the established course of payment for labor allows each school to have a military instructor on the staff. However, unfortunately, there are schools, vocational and technical schools, and technical high schools in some republics and oblasts where military instructors hold more than one office. It is necessary to make all efforts immediately to liquidate this deficiency.

Good material training resources are one of the most important factors in providing an effective training process. Therefore it is expedient for organs of national and vocational-technical education and for instructors of schools and military commissariats to develop operations for creating a total complex of material training resources in all schools, vocational and technical schools, technical high schools and training points, of which a training camp for tactical training and civil defense must become the foundation. It is necessary to think over especially carefully how to equip and outfit the training sites and areas for practical instruction. For this, competitive inspections of the best sites of material training resources that support and encourage the best workers should be conducted more often.

Training points are being formed depending on the availability of a contingent of instructional personnel in the region, in a town at one or several enterprises, in kolkhozes, and in sovkhozes. The form of organization and the providing of exercises and examinations are determined by a decision of the executive committees of the local soviets of people's deputies. On the basis of these decisions, leaders of enterprises at which there are training points bear direct responsibility for them.

A significant place in initial military training is allocated to field exercises. It is necessary to conduct them at the concluding stage of training with the goal of improving the knowledge and skills of future soldiers in tactical, firing and drill training, and military topography. For example, in general education secondary schools tenth (eleventh) grade students go out on field exercises in March to May. Eighteen hours are allotted to each class (group) for handling all problems, but at the expense of training time allocated for initial military training. Firing automatic weapons with live rounds is included.

It is expedient to conduct field exercises by means of a simultaneous muster of youth from all (several) training schools and training points of the region (town) at sports-defense fields, pioneer camps, or sponsoring military units with the concurrence of the command, or by means of a youth muster from one training school or training point; also through the method of daily trips of youth from each class (group) to the field for target range firing. The time and order of conducting field exercises would be determined on the spot depending on climatic conditions and the distance of the region from training schools. During this time, training platoons of up to 30 people can be formed from the youth of one or more training schools. If in a training school two youth training platoons go simultaneously to field exercises, it is necessary for the organs of national and vocational-technical education and for instructors of the training school to allocate a teacher or instructor to assist the military instructor (on the basis of one person for each training platoon).

In those regions where there are no training ranges or training fields and military unit target ranges, it is necessary for organs of national and vocational-technical education jointly with military commissariats, civil defense headquarters and DOSAAF committees to find possibilities immediately for forming material training resources for conducting field exercises.

In the forthcoming training year there will be changes in the initial military training program.

Military technical training is excluded from the program. The role of DOSAAF organizations, which is called to strive for each youth entering the army to have the necessary minimum of military-technical knowledge or to master one of the military-technical specialities, is growing sharply in connection with this. It is necessary to maintain the military-technical training classes and to enlarge the network of various technical societies and clubs for this in training schools.

The content of the section "Soviet Armed Forces on Guard of the Homeland" has changed significantly in the program. It does not include problems that are studied in history and social sciences lessons in the course of military-patriotic measures.

"Tactical Training" is one of the basic sections of the program. This section does not include training problems, which the material training resources of many training schools do not permit to be worked out. Tactical drill exercises against a tactical situation background remain the leading method.

While going over subjects on firing training, future soldiers must learn thoroughly automatic weapons equipment, the methods and rules of firing it at stationary targets, and accomplish four preparatory exercises with a small caliber rifle so that afterwards they will have the confidence to fire an AKM [Kalashnikov submachine gun] with live cartridges without a miss. It is essential to organize training sites for each exercise so that maximum training time is spent on training. It is noted that the program requires preparatory exercises to be executed only with small caliber rifles [TOZ-8] with an open sight.

Requirements in drill training and their knowledge of regulations have become more stringent for students. It is necessary for those who wear the military uniform tomorrow to tighten up and tidy up today; they are obligated to know how to execute drill movements correctly and to observe the elements of military courtesy and saluting. If young people will perfect the knowledge and skills received at all exercises on initial military training and physical training during the conduct of defensive games, the work of military instructors will turn out to be effective here.

The section on civil defense is significantly improved and still more attention is directed in it in practice.

Exercises on initial military training, the goal of which is the teaching and indoctrination of the future defenders of the socialist fatherland, are conducted only in the Russian language.

Initial military training is a national matter. Without a doubt, the high patriotic and working enthusiasm of the Soviet people called for by resolutions of the 26th CPSU Congress; the active assistance of party and soviet organs; and the effort, initiative and perseverance of everyone who is responsible for the military instruction and military-patriotic indoctrination of youth guarantee fulfillment of the tasks set by the Communist Party and the Soviet Government.

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MULTINATIONAL TRAINING IN TURKMEN SSR DISCUSSED

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) p 40

[Article by R. Atayeva, director, Secondary School No 45: "Together in a Friendly Family"]

[Text] Back at the dawn of Soviet rule, Vladimir Il'ich Lenin said: "We must strive to bring together children of all nationalities in the same schools of a given locale." Our Secondary School No 45 is such a school. It teaches children of 20 nationalities, and in two languages for that matter--Russian and Turkmen. This is precisely why the teachers and the party, Komsomol and DOSAAF organizations devote so much attention to forming a single friendly collective, which has important pedagogical and social significance.

Sincere relationships are established between the students through daily communication at school. In particular, Russian friends help Turkmen students gain better facility with Russian, which has become a second native language to them.

The international friendship club plays an enormous role in indoctrinating schoolchildren in the spirit of friendship and comradeship. Most of the students work together in it--Turkmens, Russians, Tatars, Ukrainians, Armenians, Azerbaijanis and children of other nationalities.

The young internationalists chose Hero of the Soviet Union Yan Nalepku as the honorary member of their club. This Czechoslovak patriot was the organizer and commander of a Slovak partisan detachment operating as part of A. Saburov's partisan formation on Ukrainian territory occupied by the Germans. He died in the liberation of the city of Obruch.

With the help of Czechoslovak Pioneers from the cities of Lignitse and Mikolulovitse, the international friendship club members gathered together extensive material on the life and activities of this valorous warrior.

The Great Patriotic War and its events, campaigns and battles have been and continue to be a constant direction of inquiry for our younger generations. They try to learn as much as they can about the roots of the Soviet people's victory from books, textbooks, from the materials they gather and from meetings with war veterans, who describe how soldiers of different USSR nationalities fought the enemy side by side.

The children have high esteem for those who gave their lives to make today a better place. One feels this especially strongly on entering the school's hall of combat glory, containing photographs, documents and the memoirs of Hero of the Soviet Union Major General I. V. Panfilov, who participated in the fight against the Basmach rebellion in Turkmenia in the 1920's. A large and interesting exhibit is devoted to the steamship "Ashkhabad," which distinguished itself as a transporter and which was sunk in 1942 by torpedoes from a fascist submarine.

A display titled "Pacific Fleet Seamen and We the Students of Ashkhabad Secondary School No 45" describes the strong friendly ties Pionneers and Komsomol members have with today's defenders of the motherland's sea borders. This display acquaints future soldiers with naval specialties, with modern combat equipment, and with the seamen responsible for it. Here also one can find reports by pathfinders and seamen on the work they have done. It has become a tradition for the school's Pioneers and Komsomol and DOSAAF members to send gifts to naval seamen on Soviet Army and Navy Day.

The school's hall of combat glory is used for exercises in bravery, for the events of Young Antifascist Week, for "Mal'chish-Kibal'chish" and "Well, Now, Lads" rallies and solemn parades.

The school's Komsomol members have a special memory of that warm autumn day on which border troops invited them to a discussion evening on the topic "What Our Motherland Means."

"Assume parade formation!" The senior classmen and border troops formed up beside the state border post in response to this command. All became highly agitated: After all, they were standing at the threshold of the vast Soviet land. Following the parade, the soldiers showed their guests the frontier post and then invited them into the Lenin Room for a holiday banquet. They described their difficult and honorable service, and the children talked about their school, in which children of different nationalities learned together, about their friendship, and about how they are preparing to protect the fatherland.

"Campaign of the Stars"--this is what the Komsomol members and Pioneers named their 3-day tour of their city. The route was approved at a meeting of the Komsomol committee and the council of the Pioneer Detachment imeni I. V. Panfilov. The children visited the history museum, where they acquainted themselves thoroughly with materials about the nine Ashkhabad commissars and about the participation of our countrymen in the Great Patriotic War. They met with Hero of the Soviet Union Bogdanov. They visited a cotton factory, they learned what modern production means, and they talked with Hero of Socialist Labor Ena Kuliyeva. In their classrooms and at Pioneer rallies and Komsomol meetings, the participants of the campaign informed their peers about what they saw and heard.

Such joint campaigns are living lessons of Leninist internationalism.

The decisions of the 26th CPSU Congress and of the 22d Congress of the Turkmenian Communist Party open up tremendous possibilities for intensifying ideological and political indoctrination of the growing generation.

The teachers of our school believe the main purpose of their work to be to make the schoolchildren aware of the insurmountable force of the ideals of communism. Many useful functions and initiatives came into being in our school, to include meetings with elderly communists and with veterans of the Great Patriotic War, correspondence with the crew of a new steamship bearing the name "Ashkhabad," and correspondence with soldiers of the Panfilov regiment. On the initiative of the Turkmenian Komsomol committee, construction of a shooting gallery by the efforts of Komsomol members and Pioneers was declared a priority project. Children of all nationalities represented in the school are working on it hand in hand.

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FAMILIARIZATION LECTURE ON 85 MM CANNON

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) pp 42-43, rear cover

[Article by Engineer-Colonel V. Knyaz'kov: "The Cannon"]

[Text] The cannon would perhaps never be confused with another artillery gun. It is distinguished primarily, of course, by its appearance. One of the typical features of a cannon is its very long barrel. And this, if you like, is an inherent design feature, one stemming from the purpose of this artillery gun.

After all, cannons are mainly intended for direct fire. It is precisely in such a case that their fire is the most effective, and that dependable target destruction is achieved with minimum ammunition consumption. The layer can clearly see the target before him--what could be better? Moreover he lays the cross hairs over the target's most vulnerable place. The projectile's trajectory is flat--it "floats" over the ground. Hence follows another concept--the flat trajectory range. This is the range over which the projectile's trajectory does not rise above the height of the target.

It is very great for cannons, and it depends, as we know, on the projectile's muzzle velocity, which is very important in relation to armored targets. To destroy a tank, for example, the projectile must strike it as hard as possible. Then the armor would be pierced or disintegrated, and the tank would be knocked out of action.

Of course the impact action of an armor-piercing shell depends also on its shape, the strength of its body, the angle at which the projectile meets the armor, and finally the strength of the armor itself. Nevertheless the projectile's muzzle velocity is one of the decisive factors. It is the main concern of the designers.

How can it be increased? Two ways are possible: raising the pressure of powder gases or lengthening the path along which they act upon the projectile. It is not hard to do the former--just use a larger powder charge. To do the latter, we increase the length of the barrel.

Soviet designers have created improved models of domestic cannons that are mounted on tanks, airplanes and ships. They represent a harmonious combination of good combat, tactical and operational characteristics.

Let us look, for example, at the 85-mm auxiliary-propelled gun--the most typical representative of this class of guns, and at the same time one which has an extremely unique design.

Take a look at the figure below. The cannon's very long barrel is the first thing to catch the eye. While the total length of the gun is 8.4 meters, the barrel is almost 6.3 meters long. Hence follows its sizeable flat trajectory range--almost a kilometer (to be more accurate, 950 meters).

The purpose of the cannon is to provide direct support to motorized infantry and tank subunits on the battlefield. This predetermines all of its fire missions as well. Its general mission is to suppress and annihilate enemy manpower and fire weapons. At the same time the cannon can be used against tanks, APC's and infantry combat vehicles, it can destroy wire entanglements, dragons' teeth and light shelters, and it can fire on earth-and-timber emplacements and permanent pillboxes.

Now let us turn our attention to some design features of the gun.

It was mentioned above that the 85-mm cannon is auxiliary-propelled. The term is generally understandable--the gun moves by itself, it travels without assistance from the outside. But when, and under what conditions?

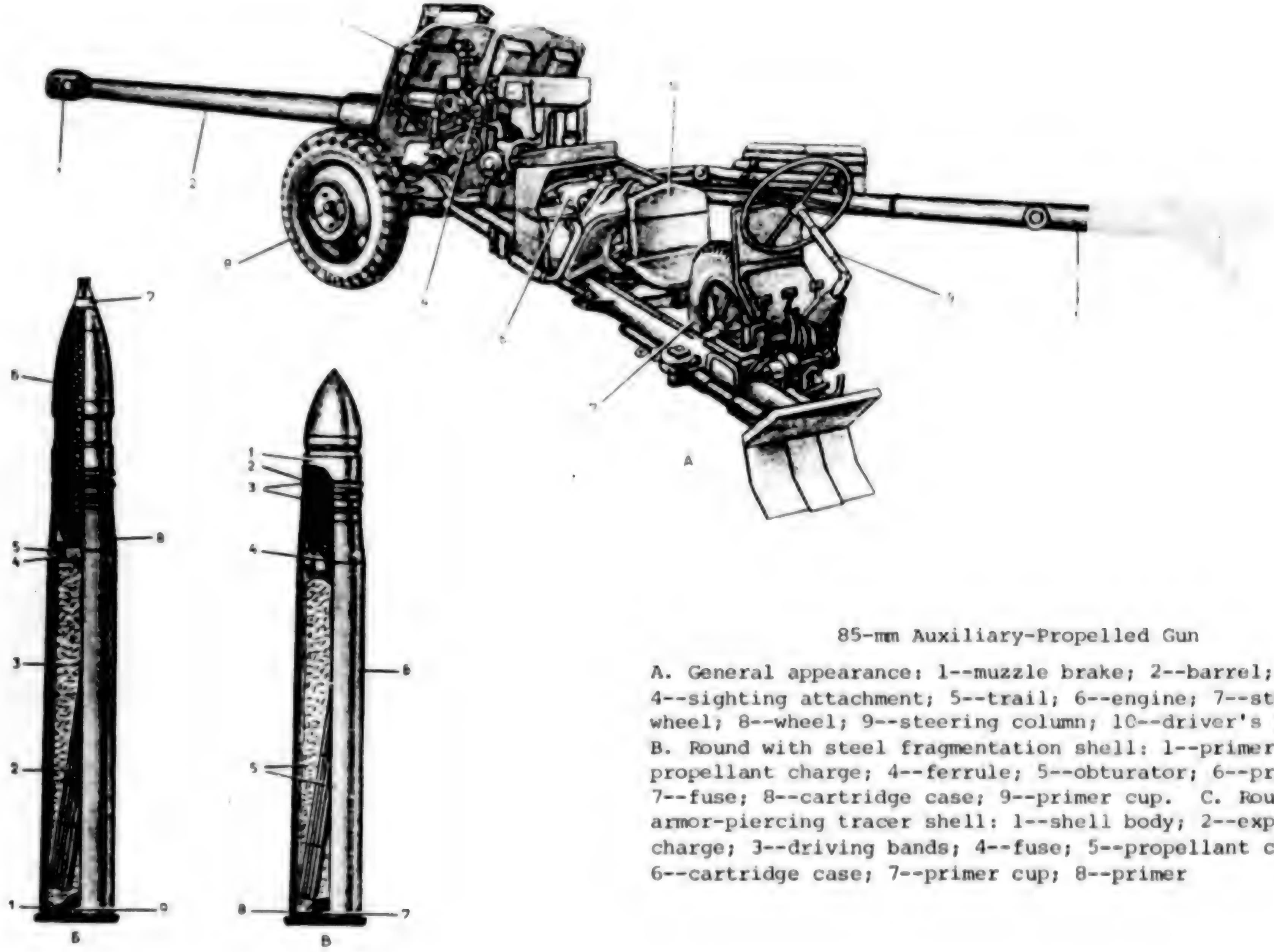
Of course, when long distances are involved--during a march for example--the gun is transported by a prime mover at a speed of up to 60 km/hr (on good roads). In this case it is a representative of classical towed artillery. Under combat conditions, however, the cannon moves on its own steam, for which purpose it is supplied with a so-called auxiliary propulsion unit. This purely technical term stands for a conventional internal combustion motorcycle engine--a piston, two-cylinder carbureter engine. It is mounted on the left trail, on which the transmission and the steering are located as well. Together with the clutch, gearbox and brake, the engine is covered by armor which protects these mechanisms from damage by fragments and bullets. Thus the gun gains significant advantages in maneuverability. Judge for yourself.

Assume that the attack wave has engulfed the enemy trenches and is rolling onward. The gunners cannot sit around either--they must not get behind the motorized riflemen.

A flag flutters in the commander's hand. On command, the crew places the cannon in travel position. The driver takes the seat and starts up the engine, the crewmembers also seat themselves on the trails, and they all drive on with the barrel forward. The speed? Albeit low, it is fully sufficient for combat conditions--about 5.5 km/hr.

But this is not the limit. If the situation and the terrain allow, the cannon can turn around and move with the barrel behind. In this position it can travel up to 15 km in an hour.

The distance the cannon can travel on its own depends primarily on how much fuel it has. We must give credit to the designers for finding an extremely original concept. The gun does not have a separate fuel tank. Gasoline is poured right into the hollow trails, easily and reliably. The total capacity is 58 liters--that is,



85-mm Auxiliary-Propelled Gun

A. General appearance: 1--muzzle brake; 2--barrel; 3--shield; 4--sighting attachment; 5--trail; 6--engine; 7--steering wheel; 8--wheel; 9--steering column; 10--driver's seat. B. Round with steel fragmentation shell: 1--primer; 2,3--propellant charge; 4--ferrule; 5--obturator; 6--projectile; 7--fuse; 8--cartridge case; 9--primer cup. C. Round with armor-piercing tracer shell: 1--shell body; 2--explosive charge; 3--driving bands; 4--fuse; 5--propellant charge; 6--cartridge case; 7--primer cup; 8--primer when on its own power the cannon can travel an average of 220 km. This is not bad at all--it means that the cannon can do without a prime mover in such a case.

But naturally the battlefield is not a paved highway. The most diverse obstacles can be encountered literally at every step. Moreover the weather is far from always ideal. How would an auxiliary-powered cannon do in rain or snow?

The designers foresaw some mechanisms and parts making it easier for the crew to operate in difficult terrain. In general they are not complex, and they are quite convenient and useful.

Let us begin with the underdrive. Every driver knows its purpose. It is essentially an auxiliary gearbox. As soon as a difficult portion of the route is encountered, the driver turns on the underdrive to increase the torque on the driving wheels, and the cannon continues to travel forward. Now imagine for a minute that the 85-mm gun must cross a snow field. It cannot detour around it or fly over it. This is where the underdrive comes to the rescue. Owing to it, the auxiliary-powered cannon can cross a snow field from 300 to 600 mm deep, depending on the density of the snow.

However, all sorts of surprises can occur in difficult road conditions. For example, one of the wheels may get stuck. What can be done if there is not a bush or tree to be found--just soggy clay beneath your feet?

The driver engages the differential locking mechanism. Recall that the differential allows the cannon's two wheels to move at different RPM's over uneven terrain. This is especially true when the cannon makes a turn. It would be noticeable even to the naked eye that the inner wheel turns more slowly. But something else should be kept in mind here as well. No matter what the conditions of travel, the differential imparts the same torque to both wheels. And when one of the wheels begins to slip, the torque decreases dramatically--that is, the nonslipping wheel's traction with the ground cannot be utilized.

The differential locking mechanism eliminates this shortcoming. A turn of a handle, and the differential begins to move as a single whole together with the semiaxles. The cannon could now travel forward owing to the nonslipping wheel's traction with the ground.

But if both wheels begin to slip together--when they both get stuck or when they fall into a hole of some sort, a self-recovery winch comes to the rescue. Its drums are located on the wheel disks, and the cable is on the shield. The self-recovery winch can be used to extricate a stuck cannon if there is some sturdy object to which to attach the cable--a tree, a stump and so on. Chains can also be put on the driving wheels to improve passability.

The cannon can cross water obstacles on its own (the ford can be as much as 0.5 meters deep).

As we can see, specialists have done everything to permit the cannon to move independently in especially difficult road conditions and to allow the crew members to act confidently in any situation.

"Tanks on the right! Prepare for combat!"

This is something the crew expects to hear at any moment. The covers are flung off of the breech and muzzle brake, the trails are moved apart, and the ammunition is prepared. The loader forcefully drives the heavy shell into the loading chamber. The breech mechanism clangs shut--a massive "wedge" dependably locks the bore.

"Follow the lead gun! Armor-piercing shells! Fire!"

The gun belches angry fire, its roar spreading over the surrounding fields. A spent shell casing flies out smoking, and rolls to a stop between the trails.

Let us make a slight digression here. When the gun must be fired at a rapidly moving target, its high rate of fire acquires enormous importance. It is achieved owing to the use of a semiautomatic breech mechanism, which opens on its own after every shot. The aiming mechanisms are conveniently designed and located. The cannon's combat use is also accelerated by the use of preloaded artillery rounds--quick-firing fixed rounds.

The second and subsequent shots are made every 3 seconds, such that the cannon's maximum rate of fire is 20 rounds per minute. The sighting rate of fire is somewhat lower--up to 15 rounds per minute. Nevertheless this is believed to be very high. After all, a sighted shot can be made at the enemy every 4 seconds. That is barely enough time to carry the shells to the cannon.

The gun fires. The gun carriage does no more than shudder slightly, while the barrel first shoots quickly backward and then returns to its initial position just as quickly. The eyes are barely able to register the back-and-forth movement of the barrel. This is the work of the antirecoil mechanisms--the recoil absorber and the recuperator.

We know that among artillery guns of the same caliber, cannons have the greatest weight. After all the barrel of a cannon is long and heavy, and its recoil is equivalent to many hundreds of tons. This is why the carraige is made strong and massive.

Let us turn to the history of Soviet artillery. Recall for example the famous Shuvalov *yedinorog*, the barrel of which was rigidly secured to the carriage. After such a gun was fired, it rolled backward. The attendant would then immediately roll it back to its former place, and re-aim it. Imagine how much energy and precious time had to be spent on these operations!

The Russian engineer V. S. Baranovskiy suggested the idea of the so-called resilient carriage: He installed a hydraulic recoil absorber and a spring recuperator. As a result he was able to create a rapid-fire cannon. All modern conventional artillery uses this principle to absorb the energy of recoil accompanying a shot.

But the recoil energy of an 85-mm cannon is so great that the designers had to introduce an additional device to absorb it. I am referring to the muzzle brake on the muzzle of the barrel. It does exactly what the words say it does--it brakes the muzzle as it recoils.

Specifically speaking, the muzzle brake is a massive hollow cylinder with holes (ports) about its generatrix. As we know, powder gases force the projectile out of the bore. After the projectile passes through the muzzle, the gases behind it strike the walls of the muzzle brake's vanes and push it forward forcefully together with the barrel. Concurrently a reactive force acting reverse to the recoil arises. Thus operation of the antirecoil devices is facilitated, which is very important. Take a look at the figure. Considering the huge size of the gun, which weighs 2,250 kg, the muzzle brake and recuperator are very compact, and small in size.

The maximum range to which a fragmentation shell can be fired from the cannon is 15,650 meters. However, I repeat that the greatest effectiveness is reached against the target at minimum ammunition consumption when the cannon is fired by direct sighting.

A shell, weighing 9.54 kg, flying out of the bore with a muzzle velocity on the order of 1,000 meters/sec destroys an armored target owing to the colossal energy it imparts the moment it strikes an obstacle. The power of such an impact is on the order of 1 million horsepower.

In a word, the 85-mm self-propelled cannon is a powerful artillery gun and a dependable resource for destroying various targets.

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DOSAAF AND MILITARY COMMISSARIATS

LECTURE ON MOUNTAIN TERRAIN PRECISION FIRE TRAINING

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) p 42-44

[Article by N. Yezhov: "An Accurate Shot in the Mountains"]

[Text] The ability to shoot well in the mountains does not come right away. Why? Does it really matter to a good marksman whether he is on a plain, in a forest or in a mountain canyon? Yes, it turns out.

We know that in the mountains, weapons are fired upward, downward and at targets at the same elevation (transversely along a slope or on an opposite slope). Depending on the position of the target, the shooting technique changes. Moreover the observed panorama in the mountains changes abruptly when a rifleman moves even a short distance. The complex relief, the diversity of the plant cover and the rocky ground make it hard to find targets and observe them, and to prepare for fire.

Preparing for fire entails occupying a position for shooting, and loading the automatic weapon. The stability of the weapon and the precision of fire depend on correct fulfillment of these procedures. First the individual must learn how to assume the prone position for fire. It is the simplest and most comfortable, especially when the automatic rifleman and the target are at the same elevation, and if the soldier must shoot upward.

Preparing for upward fire differs from preparing for fire on level terrain. In the latter case both legs are stretched straight back, while on a gentle slope the right leg should be bent slightly.

If a rifleman on a mountain slope locates his body incorrectly, he usually tries to correct his aim by using the muscles of his arms (to raise the weapon, to lower it, to turn it right or left). When he fires in such a case, and especially if his weapon is automatic, the bullets would strike above and to the sides of the target.

The soldier can detect this mistake and determine whether or not he has aimed the weapon correctly by the following procedure: He places the automatic rifle down on the slope. Then he raises it, aims and closes his eyes; after a few seconds he opens his eyes and looks which way the weapon has turned. If the line of sight had shifted downward, the soldier should move his body backward without moving his elbows, and if it had shifted upward, he should move his body forward; if the line of sight moved left or right, he should move his body in the direction of the deviation.

The cheek should not be pressed hard against the rifle butt. Otherwise when the soldier fires, the bullets would strike to the left of or above the target. Some soldiers shift their shoulder forward in an attempt to rest the butt against the shoulder more tightly. This also causes the bullets to deviate from the target, and to scatter.

The precision of fire is also affected by elbow placement when preparing to fire an automatic rifle in prone position. Widely spaced elbows make the weapon less stable, while elbows close together make breathing harder.

It is especially difficult to prepare for fire in prone position on a steep slope. The soldier prepares himself in several steps: First he extends his right leg up the slope and a little to the side. He rests his palm and then his left elbow on the ground, and then he lies down on his left side. Next he lies down prone, thrusting the welt of the boot on his bent right leg into the dirt, then he digs the toe of his extended left leg into the dirt or rests the sole of his boot against some protruding object on the mountain slope.

A soldier in the mountains must know how to shoot well from an aiming rest. Rock ledges, fallen trees and boulders 25-30 cm high can be used as aiming rests. The weapon is placed in the left palm, and the back of the hand is placed on the aiming rest. If the aiming rest is soft the front end of the stock is placed directly on it, and the magazine is grasped by the left hand to hold the automatic rifle steady.

Only he who can correct his aim for elevation will be able to aim correctly in the mountains. After all, when the soldier prepares himself correctly for fire and when the tip of the front sight is level with the shoulders of the back sight, deviation of the weapon from an aiming point 100 meters away would not exceed 5-8 cm. Consequently the bullets would not miss the target. But if the automatic rifleman shifts the front sight in the aiming slit by 1 mm, the bullet would deviate 26 cm for every 100 meters. In this case it would be almost impossible to hit the target.

What are the unique features of aiming on a mountain slope? The head should be held somewhat higher than usual, and if the muzzle of the barrel needs to be raised, the left hand should be drawn closer to the body without increasing the distance between the elbows. Unchecked breathing during a shot would cause the weapon to move. As the soldier inhales the barrel moves downward, and as he exhales it moves upward by an average of 1-2 cm. When firing at a target 100 meters away, this would mean that the bullet would strike 1 meter above or below the aiming point. Therefore the bullet would not strike the target. Consequently the soldier must hold his breath the moment he presses the trigger.

The soldier would not be able to fire accurately without first learning to squeeze the trigger smoothly. First he takes in its free play, and then, holding his breath and keeping his sights on the aiming point, he continues to smoothly squeeze the trigger until it slips from the sear notch. "Smooth" and "slow" trigger release are not the same things. When the trigger is released too slowly, it takes longer to get the shot off and the rifleman tires, which naturally leads to poor results.

Weapons are fired in the mountains not only from prone position but also with one knee on the ground. The latter position is used mainly when firing up gentle slopes. In this case when the automatic rifleman rests his weight on the shin of his right leg, his left knee presses tightly against his body, making it impossible to place the elbow of his left arm, which holds the autmomatic rifle, on his left knee, as is done when preparing for fire on level terrain. A stabler position is reached by embracing the knee with the left arm and resting the front end of the magazine of the automatic rifle on the palm. Sometimes it happens that the soldier is unable to squat down on his right shin and keep his body erect. In such a case it would be best to rest the left elbow against the left knee.

Thus far we have been analyzing uphill shooting. But what about downhill fire? If the target is below the rifleman it would be best to shoot from the knee, since in prone position the head would be below the body (causing blood to congest in the head), and this quickly tires the automatic rifleman. When firing downhill from the knee, the soldier digs the heel of his left boot into the dirt and shifts most of his weight to his right leg. In this case the angle between the shin and thigh of the left leg should be somewhat greater than 90°.

Learning to shoot in the mountains from standing position is the hardest. For example to fire accurately at an uphill target while standing, the automatic rifleman must shift his body forward, extend his right leg backward (it should form a straight line together with the body), and he should dig the left welt of his boot into the dirt. The left leg is forward, the left shin is parallel to the body, and the toe of the boot is in line with the plane of fire. When possible the soldier uses an aiming rest--a rock ledge or a tree--when firing uphill in standing position.

When the standing rifleman must fire at a target that is below him, he should extend his straight left leg forward with the toe pointing downslope and with the right leg, bent slightly at the knee, extending backward. In this way the weight of the body is distributed uniformly over both legs.

Let us recall the peculiarities of determining the range to a target in the mountains. When a target is observed from above, the range seems less, while when it is observed from below, it seems more.

Note in conclusion that a rifleman shooting in the mountains, especially from one knee and in standing position, must know how to fire at targets located at sizeable angles of sight. The elevation of the barrel in the plane of fire is controlled by moving the left hand. The higher the target, the closer the hand is drawn into the body. For example when firing downhill the soldier would find it more convenient to hold the automatic rifle by the extreme front end of the barrel; as the angle of sight decreases, the hand moves closer to the magazine. The automatic rifle may be held by the magazine, and in some cases it may even be supported from behind the magazine (by locating the hand between the trigger bracket and the magazine).

As we can see, fire precision in the mountains depends on many factors. Were even one of them to be ignored, the target cannot be struck accurately.

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RURAL PRIMARY ORGANIZATIONS AND MILITARY PREPAREDNESS

Moscow VOYENNYYE ZNANIYA in Russian No 8, Aug 81 (signed to press 10 Jul 81) pp 20-21

[Article by A. Mamayev, chief, Administration for Public Organizational Work and Military-Patriotic Propaganda, USSR DOSAAF Central Committee: "The Rural Primary Organization: Reserves for Growth"]

[Text] The 26th Congress of the Communist Party of the Soviet Union posed great and important tasks in the area of increasing our motherland's defensive power and raising the battleworthiness of the USSR Armed Forces.

The party gives a majority role in solving sociopolitical, national economic and defense problems to the trade unions, the Komsomol and other public organizations, to include the USSR DOSAAF, the main responsibility of which is to promote, in every way possible, reinforcement of the country's defense capabilities and preparation of the laborers for defense of the socialist fatherland.

Today DOSAAF is a real mass military-patriotic organization and a noticeable force in the country's sociopolitical life. As of the beginning of the present year the ranks of the defense society contained more than 98 million persons, united in 346,000 primary organizations.

Working to improve the effectiveness and quality of military-patriotic, public defense, training and sports work, the DOSAAF committees are doing everything they can to strengthen the primary organizations--the society's foundation; they are trying to make them real centers of all DOSAAF activity. And improvement of the work of kolkhoz and sovkhoz DOSAAF organizations, with a consideration for their unique features, is an important aspect of this effort. Population centers in which members of the same primary organization reside are sometimes far apart from one another. Absence of the appropriate cultural and educational institutions and of the required material-technical base has an unfavorable effect in a number of places. And yet, it is precisely in the rural areas that we find the largest number of DOSAAF primary organizations, containing a sizeable proportion of the defense society's members. This is accounted for in the work of the union republic DOSAAF central committees and of the kray, oblast, city and rayon committees. Many of them have accumulated good experience in managing rural primary organizations of the defense society.

Take for example the Omskaya Oblast DOSAAF Committee. Its workers are constantly concerned with the work of the rural organizations and with the leadership given to them by rayon DOSAAF committees. Certain aspects of the activity of these organizations are studied during visits to the local organizations, and the inspection results are discussed at meetings of the presidium or its bureau. Much has been done to place communists and Komsomol members at the head of the collectives. Group seminars and conferences are regularly held to discuss pressing problems and examine the forms and methods of their practical solution.

Much has been done in Omskaya Oblast to create and develop the material-technical base in support of productive public defense work in the countryside. All rayons possess buildings allocated to DOSAAF raykom's and sports-technical clubs. Many villages have now opened classrooms and military-technical offices.

The Omskaya Oblast DOSAAF Palace provides considerable assistance to rural primary organizations. Visiting the local organizations, its workers and activists study and generalize the best experience in public defense work. They use these materials to publish posters describing the work of rural DOSAAF organizations in Cherlakskiy Rayon, development of military-technical forms of sports in the society's Tavrichanskiy Rayon organization, and work being done by the primary DOSAAF organization of the Sovkhoz imeni Marshal of the Soviet Union K. K. Rokossovskiy, Nazyvayevskiy Rayon.

Propagandists of the DOSAAF Palace give the following lectures to rural defense collectives: "V. I. Lenin and the CPSU on Defense of the Socialist Fatherland," "The 26th CPSU Congress on Strengthening the Country's Economic and Defensive Power," "The Great Heroism of the Soviet People and Their Armed Forces in the Great Patriotic War" and "DOSAAF--a School of Courage, a School of Patriots."

Attending competitions in technical and applied military forms of sports, workers and activists of the oblast committee and the DOSAAF Palace speak with the sportsmen, take part in the publication of press bulletins and pictorial newspapers, and organize the work of the DOSAAF Palace's traveling exhibit and transcription of tape-recorded materials.

And what is most important is that workers of the oblast and rayon committees and of the DOSAAF Palace provide practical assistance in current work and help correct shortcomings whenever they visit the primary organizations of the kolkhozes and sovkhozes. This practice bears positive fruits: Most rural primary organizations in the oblast are completing their task successfully and fulfilling their socialist pledges. This in turn is making it possible for the oblast DOSAAF organization to march in the vanguard of the all-union socialist competition. Once again as at other times in previous years, in 1980 it took first place among the DOSAAF organizations of the Russian Federation's krays and oblasts, and it was awarded the perpetual Red Banner of the AUCCTU, the Komsomol Central Committee and the USSR DOSAAF Central Committee.

There are many examples of well organized work by rural primary DOSAAF organizations. It is gratifying to note in this case that many of them are continually raising their aggressiveness in military-patriotic indoctrination of the public.

When planning and organizing their military-patriotic measures, the DOSAAF committees of the best primary collectives strictly adhere to the directives of the 26th CPSU Congress requiring that the content of ideological work be timely and that its forms satisfy the present needs and demands of the Soviet people, so that real unity could be achieved in ideological-theoretical, political-educational, organizational and administrative work. Active members plan their work on the basis of the needs of the moment, the tasks presently facing rural laborers and students and the available manpower and possibilities.

And every rural defense collective has the possibilities for initiating propaganda. In fact, every village has its own good traditions of combat and labor, and concrete bearers of these traditions--veterans of war and labor, and the best kolkhoz producers. The DOSAAF committees need only encourage these people to take a more active part in public functions.

We can see from the example set by many organizations how important continuity is in this work. In addition to veterans, we must encourage young people to take part in this work, especially soldiers retired into the reserves. As a rule, having grown up at a particular kolkhoz or sovkhoz and knowing well what it is like to be a soldier, they can competently conduct military-patriotic propaganda among local DOSAAF members. Naturally correct selection of active propagandists by the committee and their well planned training play an important role in this regard.

The forms of propaganda employed by rural primary organizations are extremely diverse. As a rule they include lectures, reports, discussions, evening talks on specific subjects, film showings, and meetings organized for young people with war and labor veterans and with army and navy soldiers.

Trips to places of the Soviet people's revolutionary, combat and labor glory have enjoyed broad acceptance. Striving to learn as much as they can about their fellow countrymen, young DOSAAF members collect large amounts of material for their museums and rooms of combat and labor glory.

The youngest members of the defense society--schoolchildren--are taking their first active exploratory steps in the society, and it is very important to guide this exploration through the joint efforts of the farm DOSAAF committees and the rural school. This is one area of their cooperation which produces positive results.

And imagine how important it is to the military-patriotic indoctrination of young DOSAAF members to participate in assistance to war veterans and to the families of deceased defenders of the motherland. There are many possibilities for displaying concern and attention--helping with the harvest on a private plot, going to the store for food, chopping wood for winter, writing a letter and helping with the housekeeping. And the benefit goes beyond the fact that some one chore has been completed: The main thing is that deserving people are made happy, and that young boys and girls performing their duty as offspring gain a deep respect for the elderly, and the aspiration to become their worthy successors.

DOSAAF committees that provide direction and organization to this work and that use it for the purposes of indoctrination are taking the right approach.

Many of the forms of work listed above are typical of the primary DOSSAF organization of "Kommunar" Sovkhoz, Zhukovskiy Rayon, Bryanskaya Oblast. It has a membership of 543 persons--almost all of the farm's workers. Owing to their hard work, they have been surpassing the plans for selling meat, potatoes and other agricultural products to the state from one year to the next. The defense work of the primary DOSAAF organization is just as excellent: Its active members conduct discussions in the field with remote work teams and farms. They carry military knowledge to the masses, and they indoctrinate the people with heroic traditions.

A museum of the combat glory of the 50th Army, which defended this locale in 1941, has been created. Excursions, meetings with veterans and solemn presentations of DOSAAF membership cards to young people are organized here.

Military-patriotic indoctrination goes on in the sovkhoz in close unity with the military training afforded to the society members, with their introduction to mechanics. When it was revealed, for example, that there were not enough tractor mechanics for the spring field operations of 1980, a decision was made to train them in DOSAAF courses at the sovkhoz. Within a short time experienced mechanics trained 30 persons on equipment provided by the administration. These persons then participated actively in the field operations.

Every Sunday the work teams compete for the sovkhoz sharpshooting championship. DOSAAF Members have also come to enjoy motorcycle sports: The compete with their personally-owned motorcycles.

The example of this and of many other primary organizations shows that military-technical forms of sports contain great possibilities for indoctrination. The impact is all the more significant when sports are kept in close coordination with military-patriotic propaganda--for example when sportsmen compete for prizes in honor of local war heroes and when they compete in car and motorcycle agitation races.

Labor and indoctrination merge into a single inseparable process when studies are organized competently in the course of technical training. It is important for students attending courses sponsored by primary DOSAAF organizations to understand how necessary their future specialty would be to the farm, the army and the country. When they do, the course graduates prove themselves in agricultural work, and they become the best kolkhoz and sovkhoz producers or outstanding soldiers of combat and political training in the army, and this is the best practical result of indoctrination.

The success with which the tasks posed by decisions of the 26th CPSU Congress are completed depends in many ways on how regularly the DOSAAF committees work throughout the entire year. Efficient planning makes it possible to get a great deal done, even in summer, during the busiest farming season, to include holding sports competitions, conducting propaganda functions and disseminating the experience of the best DOSAAF course graduates. The best DOSAAF committees understand quite well that surmounting "seasonality" is an important reserve for raising the effectiveness of DOSAAF work in the countryside.

Strengthening the material-technical base is the most important problem of DOSAAF rural organizations, and it is not at all an easy one at that. The fact is that things are not going so well for many organizations because they do not have any classrooms and they do not have enough sports equipment. This can be explained not only by subjective causes but also by the fact that committees at higher levels have not yet surmounted the tendency of leaning the supply priorities toward the urban, "more-promising" organizations. They are the ones that are in the public eye, it is said, and their sportsmen are the principal candidates for the combined teams that will represent the city, oblast, kray and republic.

But supplying equipment is only part of the help that committees can give to their rural organizations in development of sports. Sending experienced trainers and sportsmen to the countryside, conducting demonstration competitions and providing methodological guidance to sports work should all be functions of the rayon, oblast and kray DOSAAF committees.

At the same time we cannot forget that it is still impossible to satisfy all of the equipment needs of the countryside "from above." This is why we should give full encouragement to those chairmen who do not wait around for things to happen, and who instead find ways to utilize the farm's facilities and the personal equipment of the local farmers to conduct technical training and to develop sports. As an example the "Marupe" Kolkhoz, Rizhskiy Rayon, Latvian SSR holds competitions in car and motorcycle driving, all-around car championships, fuel economy competitions and road races without any special sports equipment.

Naturally none of this should deter DOSAAF organizations from acquiring their own DOSAAF training and sports vehicles, motorcycles and other equipment. The main thing in creating a material-technical base is to really want to do so, and not just in so many words. There are many things that resourceful people in primary organizations can do for themselves. They can build classrooms and shooting ranges with donated materials on Saturdays and Sundays, and they can set up their own ranges for applied military competitions. The task of the committees is to inspire the active members and to convince them that they can do it.

"The countryside is everyone's concern!"--this motto, which stands for the attitude we should display toward the concerns of the modern rural community, is fully applicable to the kolkhoz and sovkhoz organizations of DOSAAF. Success is reached wherever DOSAAF organizations respond in deed to the concern of the party and soviet organs, wherever they act in close business-like contact with trade unions and with Komsomol and other public organizations, and wherever assistance from higher DOSAAF committees and urban defense organizations is combined with the initiative of the rural primary collectives themselves.

The Soviet people are in deep agreement with the statement of the 26th CPSU Congress that the combat potential of the Soviet Armed Forces is a firm alloy of high equipment availability, military proficiency and inviolable moral spirit. It is the great purpose of the All-Union Voluntary Society for Assistance to the Army, Air Force and Navy to strengthen this potential in every way possible and to make an active effort to see that ideologically mature, technically trained young people selflessly devoted to the heroic traditions of our people enter the army and navy.

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DOSAAF AND MILITARY COMMISSARIATS

PSYCHOLOGICAL TRAINING FOR CADETS DISCUSSED

Moscow VOYENNYYE ZNANIYA in Russian No 8, Aug 81 (signed to press 10 Jul 81) pp 22-23

[Article by Candidate of Pedagogical Sciences A. Podunov: "Psychological Seasoning of Cadets"]

[Text] Someone gives a command, and the cadets quickly occupy their places at real electric generators. They nimbly prepare them for start-up. Suddenly an air raid signal sounds over the loudspeaker system.

Senior Master of Production Training P. Lubyanov presses a button on his control console to close the curtains on the windows. Independent lighting sources are turned on in the practical training classroom . The cadets don their gas masks, and the on-duty electricians plug in their headphones. Bright flashes appear on the screen and on light signal panels, accompanied by the simulated sounds of bomb bursts and the noises of approaching battle.

In this unusual situation the cadets report the readiness of the power supply units for start-up one after the other. The program of the lesson does not fall behind schedule for even a second. And then, as if deliberately to disturb this intense but smooth rhythm of the lesson, a scenario input announces that fires have started and that several of the power supply units are out of commission. But even this does not cause confusion among the students. Crewmembers with nothing to do at the moment begin extinguishing the simulated fires and preparing the reserve units for start-up, and soon the reports of readiness begin coming in again.

So go the practical lessons in the Khmel'nitskaya Oblast DOSAAF Naval School. Psychological training of the cadets has become an inseparable element of training and indoctrination here. Exercises such as the lesson described above make it possible to simulate the elements of danger and risk in the best way possible, they require the future soldiers to exert their strength and their will, they force them to actively surmount unexpected difficulties, they temper the mind and they nurture fighting qualities such as boldness, steadfastness, endurance and self-control.

Using scientific data, it is not difficult today to set standards for the activity of any technical specialist and to determine the qualities needed of him. Take as an example a radar station operator. In addition to a highly developed sense of responsibility, self-control and punctuality, he must have high powers of observation, he should be able to concentrate his attention for long periods of time, he should have a large working memory, his visual analyzer should exhibit good adaptability and so on.

But even if we do develop all of these qualities to the full extent in the cadet, we cannot yet confidently say that he will be able to exhibit these qualities in a stressful situation, in combat, when the most intense stimuli will be acting upon him. Will the sense of danger not elicit mental constraint, or disturb coordination of movements and actions, or distort evaluation of information on the real situation, or reduce the speed and accuracy of reactions? Consider also that these and other factors can place in question the professional reliability of a person controlling complex equipment and the actions of other people in combat.

Experience and experiments have shown that prior training of DOSAAF school cadets in conditions close to those of real combat helps them adapt better to these conditions and to successfully complete their responsibilities in the armed forces. One of the ways to psychologically season conscripts is to use a system of trainers applicable to the particular branch and service of the troops, and to specific professions, with regard to future functional responsibilities in combat.

"Teach what would be needed in combat"--this is the principal followed in the training given to cadets at the Odessa DOSAAF Radiotechnical School. Here the future radar station operators acquire practical habits at a specially outfitted training ground.

Two radar stations providing protection from mass destruction weapons are deployed at positions on this training ground. The control post, the personnel shelter and the supply dump are set up in special underground buildings and shelters. The equipment is surrounded by a high bank of earth, the connection panels and cables are installed underground, and there are emplacements for organizing defense on the ground.

The position is camouflaged by the natural relief of the terrain, and the radar station vehicles are covered with camouflage netting. The communication system used on the training ground ensures timely receipt of information and makes it possible to monitor the work of the cadets.

There is a special classroom in the underground control post for teaching the duty shift how to assume duty. Data on the simulated enemy and the tactical and technial characteristics of his aerospace strike resources are posted on displays. Here also we can find the appropriate documents stating the order of preparing equipment and persons of the combat crew for duty, and describing their actions in response to a surprise attack by the enemy, and so on.

There is also a mobile control post deployed in three trailers, to be used for practical training in the field. The training ground also possesses an observation post with an observer's tower supplied with telephone communication.

Instructors of the Donetsk DOSAAF Radiotechnical School insert psychological training into the training and indoctrination process as do workers of the Odessa school. Special interference simulators and light signal systems have been designed for the telegraphy classrooms. These systems include a tape recorder with simulated sounds of combat (bomb and shell bursts, reports from automatic weapons, the roar of the working engines of tanks and aircraft and so on), loudspeakers, a system that converts acoustic signals into light signals, and paired red and green flashing lamps. The units are controlled from the instructor's console. There is also a radio interference console used when the cadets undergo practical exercises.

The hardest thing to do, experience shows, is to create an element of risk during training. After all, no matter how plausible simulation may seem, every cadet knows that there is no real danger to his life. But danger situations can and must be simulated. Why? Because many cadets who are bold and decisive in a normal situation can become confused and timid in a stressful situation. If this is not found out in time and if the young person fails to receive the necessary help, either he will fail to do what is required of him or he may make dangerous mistakes.

To surmount the feeling of timidity in cadets, the training task must be made gradually and successively more complex. First of all we need to establish the causes of fear. For example a novice parachute jumper may experience fear due to mistrust of the reliability of his parachute, a young SCUBA diver may be fearful due to an inability to regulate his breathing, and a rifleman may find the discharge of his weapon frightening. In each case there is a cause, and it must be determined at all costs, after which the student can be helped persistently, patiently and tactfully to surmount his lack of confidence in his strength.

A cadet should not be accused of cowardice. After all, no matter how and when he exhibits timidity, it bears heavily on his spirit, and he does what he can to rid himself of it. It is precisely toward this desire that the instructor must orient himself in his efforts to develop the cadet's courage. The best way to do this is to distract the student's attention from thoughts of danger, which the former tends to exaggerate, create a positive situation of preparing for risky actions and teach the young person to overcome his doubts and vacillation. This would be a pertinent place to recall the words of Nikolay Ostrovskiy, who says that bravery is born through struggle, that it is nurtured from day to day in stubborn opposition to difficulties.

The personal example of the instructor and daily propaganda of the heroism of Soviet soldiers during the war and in peacetime combat training are irreplaceable and very effective resources of such indoctrination.

I would like to note in conclusion that training and indoctrination in DOSAAF schools is inseparable from the psychological training afforded to cadets. Both instructors and masters of production training employed by DOSAAF educational organizations are obligated to always remember that today's armed forces impose higher requirements on both the professional and psychological training of future soldiers. Consequently the problems of psychological training for cadets must always be at the center of attention of pedagogical collectives.

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MILITARY SCHOOLS AND ACADEMIES

HISTORY OF KIROV CASPIAN HIGHER NAVAL SCHOOL DISCUSSED

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 81 (signed to press 9 Jun 81) p 6

[Article by A. Chernykh: "Higher Red Banner School"]

> [Text] The editor's office often receives letters from senior classmen asking for information on naval schools. We have received such requests from V. Stashkevich of Vitebskaya Oblast, Ye. Bondarenko from Yevpatoriya, V. Zabelin of Chitinskaya Oblast, V. Ponomarev from Tyumen', V. Makhnev of Kirovskaya Oblast and other readers. To satisfy these requests, our correspondent visited the Caspian Higher Naval Red Banner School imeni S. M. Kirov (KVVMKU).

The banner of the KVVMKU bears the Order of the Red Banner for its efforts in training naval officers. The first bell rang in this school in August 1939. And as early as in the menacing October days of 1941 the school graduated an accelerated class of young commanders. The first graduates of the school went to war, wherever the fate of the socialist fatherland was being decided. They fought on land and at sea, at Moscow and Staraya Russa, on the Dniepr and the Baltic, at the walls of Stalingrad, in the foothills of the Caucasus, in the North and on the Black Sea, and at legendary Sevastopol'.

More than 100 graduates became admirals and prominent scientists. Eighteen persons received the Hero of the Soviet Union title, and two of them--A. Shabalin and V. Leonov--received it twice.

Today the school's former cadets are serving in all of the country's fleets.

Large buildings spread over the school's territory. In them, the cadets live and learn. The school possesses an outstanding training material base. Exemplary cleanliness can be seen throughout: This is a distinguishing feature of naval order. I see even rows of cadets standing on the marching pad before the buildings. I approach one of the groups and introduce myself. I find out that cadets in their fifth year with the navigator school are undergoing an inspection prior to departing for their apprenticeship. They are being sent off by the school chief, Captain 1st Rank Yu. Sergeichev.

"I look at these lads," says Yuliy Gavrilovich, "and I can understand their excitement. After all, I myself was like them 25 years ago, when I graduated from the naval school in Sevastopol'. Today they are leaving a home which has essentially become their own. Look at them--they are real men. The school gave them a military occupation and it helped them develop important human qualities such as discipline, self-control and organization. They achievedideological maturity, and their cultural level was raised."

During a break I spoke with Cadet Andrey Glinskiy. This future navigator is from Moscow. Why did he decide to become a sailor? The reasons are many, but apparently it all began with the stories told by his grandfather, an old sailor. Oh, how he loved to tell stories!

We did not talk long. The lessons were starting. Everything is quiet throughout the school at this time. I walked through the spacious corridors, the walls of which are covered by visual aids and displays. In the main hall there is an Honor Roll bearing the names of the best graduates and present cadets. To the right and left are the classrooms, the names of which say something about what the lads are learning: ship layout, navigation, ship control. There are well-lit offices and auditoriums in which the theory of Marxism-Leninism and the all-arms regulations are studied, where lectures are given, and where seminars are held. There are many technical classrooms, and there are places for sports.

"The profession of a naval seaman," says the school chief, Vice Admiral V. A. Arkhipov, "requires diverse knowledge and skills. Having mastered the theory and acquired the skills of working with instruments and trainers, the cadets leave for practical work. On the ocean they test their preparedness for service as naval officers. We have a remarkable school. I myself graduated from it in 1947 to become a submarine navigator . I served on the Baltic, and 15 years in the North. Now together with a large detachment of qualified instructors and commanders I transmit my experience to the cadets.

"Each year we receive a new complement. If any readers of this journal intend to enter our school, let them know that its doors are open to every young person. But in order to be admitted to the school the applicant must know the school program well, and be physically fit. He must have qualities extremely necessary to an officer--punctuality, accuracy, and the ability to think analytically. Frankly speaking, the examination will not be easy. The requirements imposed on the applicants are high. But dreams must be fought for. I wish young people success in their exams ."

> We advise those who wish to become officers in the Soviet Army and Navy and learn about the school admission requirements and about what applicants should study to read the article "The Officer--a Heroic Profession" in our journal (No 4, 1981).

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PERCEPTIONS, VIEWS, COMMENTS

SOVIET VIEW ON U.S., NATO IN ARCTIC REGIONS

Moscow VOYENNYYE ZNANIYA in Russian No 2, Feb 82 (signed to press 7 Jan 82) p 31

[Article by Captain 1st Rank I. Korsikov based on foreign publications: "The Artic in NATO's Plans"]

[Text] Nurturing delirious plans of unleashing a new world war and establishing unshared supremacy over the world, American imperialism is transforming many regions of the globe into nuclear missile trampolines for aggression. One such region is the Arctic which, in the opinion of the American command, will become an important theater of war for the USA in any global conflict.

In the estimation of the NATO command the strategic significance of the Arctic rests mainly on its geographic position. The Arctic is viewed as an advantageous springboard from which strikes could be made against vitally important centers and facilities of the Soviet Union and other socialist countries, as well as a convenient region for deploying early detection and warning systems. On this premise the Pentagon has been deeply studying this region since 1947, and it is transforming it into a military springboard.

The principal directions of research in the Arctic, the American press reports, are: study of the natural conditions and their influence on the use of armed forces in combat; creation of special models of armament and combat equipment for use in Arctic conditions; special training of troops and the navy and their practical assimilation of the polar regions; equipping the springboard for operations.

Beginning in 1949 specialists of the navy's electronics laboratory, the hydrographic department and the oceanographic institutes of the USA have been systematically conducting research in hydrology, oceanology and meteorology, and they have been studying the characteristics of the ice cover.

A great deal of work was done in 1956-1957, when the American and Canadian commands sent several joint expeditions to the Arctic, in each of which from 15,000 to 20,000 persons, more than 100 ships and vessels and many airplanes and helicopters participated, according to reports in the NAVY TIMES.

About 60 weather stations have been located in the Arctic portion of Canada and Greenland for weather observation and forecasting.

A great effort is being made to develop a sea route between the Atlantic and Pacific oceans, passing through channels in the Canadian Arctic archipelago. Some foreign newspapers believe that given the presence of powerful icebreakers, naval forces could be maneuvered from the Pacific into the Atlantic and back through the Northwest Passage, which is extremely important if the Panama Canal is put out of action.

American military icebreakers can often be seen near the shores of our country. Consequently besides scientific research for military purposes, icebreakers of the U.S. Navy perform pure reconnaissance missions as well.

The U.S. Navy is also using atomic submarines to study the aquatic environment of the Arctic Ocean. Beginning in 1957 they have been regularly making subglacial cruises in the Arctic basin. According to the foreign press, just in the period from 1957 to 1961 the American submarines Nautilus, Skate, Seawolf, Sargo and Sidregon made seven such cruises, during which they performed an entire complex of research and tests. In the words of D. Kalbert, the commander of the atomic submarine Skate, the most important result of the research was getting the confidence that the U.S. Navy could use the regions of the Far North as a theater of war year-round.

According to reports in the journal UNITED STATES NAVAL INSTITUTE PROCEEDINGS, subglacial cruises by atomic submarines have confirmed the possibility that they can navigate beneath Arctic ice and find openings in the ice for surfacing in both summer and winter with the purpose of launching missiles against enemy objectives.

The command of the U.S. Armed Forces devotes considerable attention to finding ways of operating combat equipment at low temperatures, designing airfields and shelters for airplanes on snow and ice, and discovering ways to store fuel and lubricants in Arctic conditions. Special forms of weapons are being developed as well. In particular, chemical ammunition filled with nonfreezing war gases, deep-sea mines and torpedoes and high-power explosive charges are being created.

Special units and subunits that practice specific missions in their combat training are being created for operations in Arctic regions.

Models of combat equipment and armament created by the Pentagon are being carefully tested in complex polar conditions. Ships of new designs are also subjected to such testing. Thus new air-cushion launches have been tested in northwestern Canada on the tundra, on frozen lakes and on the edge of the Arctic ice pack.

For the same purposes the Pentagon is organizing exercises and maneuvers in which, according to foreign specialists, the troops get experience in conducting combat operations in winter at high latitudes.

The northern zone of Europe from Nordcap to Jutland is a place of major exercises of the NATO armed forces.

One example of a series of such measures was the two-sided exercise of mobile NATO forces under the code name "Anorac Express-80," which was held in early 1980 on the territory of northern Norway. According to foreign press reports the main goal of the exercise was to refine and firm up the plans for transferring NATO mobile forces and American, British and Dutch marines to the bloc's northern flank in crises situations, and to verify the readiness of the troops for operations in the Arctic winter jointly with the armed forces of Norway using conventional weapons. The exercise "Team Work-80" was also conducted on Norwegian territory and in the northeast Atlantic with the participation of up to 60,000 servicemen, 170 ships (including the American atomic carrier Nimitz), and 400 airplanes and helicopters representing 10 NATO countries.

In the combat training of naval forces, the main attention is devoted to assimilation of Arctic regions by atomic submarines and to working out the problems of antisubmarine defense on antisubmarine lines in the Barents, Norwegian and Greenland seas. Preparing for mine warfare in the northern latitudes, the U.S. Navy is testing the capabilities for transporting new "Captor" mines aboard B-52's based at a Greenland airfield. The possibilities of using submarines for covert placement of mines beneath the ice are being worked out.

In the heat of military hysteria, the reactionary press periodically publishes revelations by "hawks" concerning the use of the new mines. In particular it was reported in relation to the "Captor" mines that in the case of war, they could be suitably used to create an antisubmarine barrier in the Denmark Strait between Greenland and Iceland. According to the estimates of American experts, it would take 200 "Captor" mines to block submarine passage in the North Atlantic between Greenland and England. Their cost would be 10 percent of one torpedo-carrying atomic submarine (it would take not less than 20 of them to perform the same mission).

American submarines are also practicing the missions of interdicting Soviet Arctic lines of communication and landing sabotage groups and small assault parties on the north coast and margin of the ice pack.

American aggressors believe the aerospace corridor passing from the USA across the Arctic Ocean toward the Soviet Union to be one of the most important in a future war. The foreign press has carried the suggestion that in the event of war, more than half of the USA's intercontinental ballistic missiles and a third of its strategic bombers based on the North American continent will use this corridor.

Especially great significance is attached to creating and deploying air bases and airfields in Arctic regions. According to the foreign press there were more than 100 airfields on just the territory of Alaska and the Aleutian Islands in the 1970's; of these, not less than 10 could be used by strategic bombers. About 10 air bases and airfields have been built by the USA in Greenland. The largest of them are at Thule, Nord and Sondre Stromfjord. The Pentagon is not keeping it secret that the American base at Thule has been transformed into a nuclear weapon arsenal. American spy airplanes and bombers carrying nuclear weapons are based here.

Drawing Iceland into the aggressive NATO bloc, American imperialists are preparing its territory for implementation of their aggressive designs in the Arctic.

The Pentagon gives a special place to Norway in its aggressive plans. The heightened attention to the northern flank of NATO is explained in Washington by, in particular, the fact that this is the sole place in Europe where a NATO country (Norway) contacts the Soviet Union for a distance of 165 kilometers. Special emphasis is laid in many NATO documents on the strategic importance of this portion of the border, considering in particular that this border is not far from Murmansk--the only large nonfreezing Soviet port in this region of the Arctic.

We must not ignore the fact that the militant commotion on the northern flank of the aggressive bloc coincides with sharp aggravation of the international situation at the fault of American imperialism.

Preparing for a nuclear war against the Soviet Union and other socialist countries, American aggressors should remember that in such a war they would suffer the severe penalty of a retaliatory attack. The Soviet people and their armed forces are alertly monitoring the war preparations of the Pentagon in the Arctic.

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